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ABSTRACT

Methods that can help individuals learn to develop their inborn creative potential are presented and explained in this teaching packet. The first section of the packet is for the teacher's use and explains the approach to creativity used in the materials and the importance of creativity. Suggestions for developing this creative potential in oneself and in one's students are provided. An evaluation device is included which enables one to take an inventory of one's own attitudes toward creativity. The student section of the packet contains worksheets in five areas: "Unexplored Territory," "Is Your Creativity Showing?" "Blocks to Creativity," "Thinking in New Dimensions," and "Ready for Action." Solutions to the activities in the student section and a list of additional activities are provided in the teacher's section. A bibliography of books and pamphlets on creativity is also included. (TO)

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TEACHING PACKET FOR NEW DIMENSIONS IN CREATIVITY

Written by

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College of Education
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for the

Home Economics Education Association of the National Education Association

CS 201 703

Illustrated by Carol Petersen

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TO OUR READERS:

Through New Dimensions in Creativity you will be able to reward students with a type of learning they will find exciting. It may even help you, the teacher, discover a new facet in your own life. You will find the format practical, functional and an easy to use resource.

The Home Economics Education Association is deeply indebted to and most appreciative of Dolores Gade's contribution on Creativity. There are thoughts and ideas to stimulate and challenge your thinking. May this be a tool to help you to help others to help themselves.

Enid A Carter
President, HEEA

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INTRODUCTION

WELCOME TO THE WONDERFUL WORLD OF CREATIVITY!

There are certain methods that can help an individual to learn to develop the inborn creative potential each of us has. It is the mission of this teaching packet to explain these methods and to provide opportunities for you and your students to learn to use them to achieve your desires, solve your problems, TO CREATE!

The packet is divided into two major parts. The first section is for the teacher's use. It includes "Notes To The Teacher" which explains the approach to creativity used in these materials and the importance of creativity. It discusses why it is important that we develop it in ourselves and in our students. It also provides suggestions on what the teacher can do in working with students to develop this potential. At the end of this section an evaluation device has been provided for you to take an inventory of your personal attitudes toward creativity.

The teacher's section of the packet provides suggestions for lesson outlines, a narration, which can be used either as a script for recording on a cassette tape or as an assigned reading, and materials which have been specified for certain class activities.

A list of other suggested activities which could be used throughout the entire packet can be found at the end of Lesson Packet 5. These could also be used as quest experiences for the student who would be interested in exploring creativity further.

The "Solutions To The Exercises In The Student Section" have been placed in the Teacher's Section of the packet. The teacher can then provide the student with the solutions upon request. Also included in the Teacher's Section is the Bibliography for the complete packet.

The Student Section can be duplicated to provide each with a personal copy of the worksheets. Each section for the student corresponds to the five Learning Packets in the Teacher's Section.

It is important to note that the student is not required to complete the entire group of exercises, techniques, and approaches. However, there are several required to achieve the performance objectives found at the beginning of the student section.

It is hoped that each person who completes the packet will feel that they have had a wonderful adventure exploring the hidden depths of their creative potential.

Dolores Gade
March 1974

NOTES TO THE TEACHER

Do you believe that creativity is or can be of vital importance to the individual, to the family, to community life, even to national survival? My challenge to you—the teacher—is to encourage and help to develop the creative potentialities of all whom you teach.

Why does man create? How does he create? Creativity, what is it and what does it mean? Such questions as these intrigue educators, sociologists, psychologists, scientists, parents, and even the individual.

The subject of creativity is indeed complex. It has been a source of endless speculation for centuries. Man has been creating since the beginning of time. This has been a need from our earliest beginnings. A child's need to play is creative. A young person's questions, exploration, experimentation are attempts to satisfy a creative need. An adult striving to improve is a creative need.

If we didn't feel this need to satisfy our curiosity, to express ourselves, to use our talents, and abilities, to satisfy our innermost cravings—"to create"—we might still be living in caves. The wheel would never have been invented, America would still be undiscovered, and the walk on the moon would not have been taken.

"NOW what has that idiot invented?"

Dr. E. Paul Torrance in **Encouraging Creativity in the Classroom** stated, "Human needs are involved in each stage of the creative thinking process. If we sense something missing or out of harmony, tension is aroused. We are uncomfortable, and we want to do something to relieve the tension. This makes us search for possible solutions, ask questions, and make guesses."[1]

"AFTER AIR, WATER, FOOD AND PROTECTION IN SEVERE CLIMATES, THE FIFTH NEED OF MODERN MAN IS NOVELTY."

Dr. John Radar Platt

Techniques to increase awareness of one's enviornment can prove to be beneficial in satisfying one of the fundamental creative needs—CURIOSITY. Encouraging questions and presenting puzzling questions would also serve to arouse curiosity. Teaching skills in testing limits under alert and sensitive guidance is a means of satisfying the need of meeting challenges and attempting difficult tasks. Outstanding creative achievement involves a successful step into the unknown, attempting difficult jobs, making honest mistakes and responding to challenge.

One of the truly important factors in highly creative achievement is a strong tendency toward stress seeking. Is a person willing to take risks? Do they test the situation and test their other resources? These skills can make a person great. Benjamin Franklin was an example. He took a risk and tested his limits with electricity.

We need to give ourselves completely to a task—to become fully absorbed in it. The creative person frequently becomes so absorbed with his ideas and problems that he is unaware of what is going on around him. He is sometimes even absentminded.

An individual must be able to make independent judgment and to have the courage to stick by his conclusions and to work toward their achievement, even when he is in the minority at the beginning. Honesty and a search for truth is another need.

We need to be different, to be an individual. Usually we are more concerned about "appearing to be" than about "being." Even when one is different in ways which are defined as socially desirable, he finds himself under pressure because he may work too hard and learn more than he should. He may be too honest, too courageous, too generous, or too kind. He may also be too adventurous, curious and determined. Therefore, he is not always acceptable to the "average" person.

"WHAT IS HONORED IN A COUNTRY WILL BE CULTIVATED THERE."

Plato

To paraphrase Plato, what is honored in your classroom will be cultivated there. Will you honor the creative potential of your students, and will you help them to cultivate this potential?

Two psychologists at the University of Chicago, Getzels and Jackson, have for some time been doing interesting studies on adolescents' creativity. They found that, while the high I.Q. adolescent wants the qualities he believes make for success and the qualities he believes his teachers like, the highly creative adolescent, in contrast, favors personal qualities. These qualities have no relationship to those he believes make for success and are in many ways quite the reverse of those he believes his teachers favor. If the creative adolescent doesn't favor the things his teachers like, his teachers, in turn, do not especially like him either! What kind of a student do teachers like? Results of investigation are uniform on this point: They very much prefer students who are bright, persistent, conscientious academic achievers who "cause no trouble", whose personal adjustment is characterized by self-control, a sense of security and freedom from anxiety. If teachers can relax and enjoy themselves they have some wonderful surprises.[2]

International leaders have said that the future of the world depends on the quality of creative thinking, and on the creative ideas developed and proposed by manking for every aspect of living. The world will become better only if and when we develop the individual potentiality and social responsibility of every person.

As a concerned teacher your goal may be to develop self-confidence, self-fulfilled citizens who display more initiative and related qualities of leadership. The purpose of life is not necessarily to be happy. The purpose of life is to matter, to be productive, to have it make some difference that you

[1]Torrance, E. Paul, **Encouraging Creativity in the Classroom**, p. 13

[2]Torrance, E. Paul, **Guiding Creative Talent**, pp. 118-119.

lived at all—to develop one's talents and potential to the fullest. Evidence has been found of a close relationship between what a person thinks and does, and the image he has of himself. There is remarkable consistency with which a person conforms in his thought and behavior to the type of person he sees himself as being. In all groups, studies revealed that the self-image and ego-ideal are of crucial importance in determining the level of creativeness with which a person lives his life.[1] A teacher might get some insight into a person's self-concept by giving that student "open-ended" sentences or unfinished stories to complete.

"SKILLS OF STIMULATING THE IMAGINATION ENHANCE THE PERSONALITY—THEY ALSO PROVIDE GREATER MENTAL STRENGTH."

Sidney Parnes

The capacity to create is not limited to the person who has many talents and abilities for every person is born with some talent. It may be true that talent is a gift, but almost everyone can develop the ability to do creative problem-solving, even if it is in a limited capacity. Creative potential is in each and everyone of us!

Many teachers make the mistake of correlating I. Q. with creativity. I.Q. tests are not designed to measure creative talent. If selection is based on I.Q. alone, we will miss at least two out of three of those best fitted to be our scientific leaders of the future. Thomas Edison and Albert Einstein were both cast aside by their teachers as being unteachable and impossible. Fortunately, for the world they believed in their abilities and received the needed encouragement from important people in their lives. What is being done to encourage our truly gifted boys and girls to become more creative.

WILL THE FUTURE EDUCATION OF BOYS AND GIRLS TEND TO FAN OR FADE THEIR SPARK?

Teachers need to develop educational programs which require the student to exercise a high degree of originality. Are YOU as a teacher willing and ready to accept this responsibility in your classroom?

[1]Mackinnon, Donald W., "The Study of Creative Persons", **Creativity and Learning**, Edited by Jerome Kagan, p. 34.

Five reasons education practices inhibit creative thinking are: (1) they impart information without teaching how to apply it to the creation of new ideas; (2) they compel students to restrain desire to create until they have mastered present course content; (3) they encourage imitation—to the discouragement of creation; (4) they often tempt the student to settle for the quickest and simplest answers that will get him a passing grade? (5) they implant the notion that the end-purpose of education is the mere accumulation and memorization of facts.

As a teacher are you guilty of placing emphasis on (1) learning by rote; (2) outdated and useless curricula; (3) teaching only facts; (4) rewarding neatness rather than creative ideas and work?

WHY DO WE AS TEACHERS ENDEAVOR TO MAKE CHILDREN CONFORM TO BECOME SOCIALLY WELL-ADJUSTED?

A course in creative problem-solving can almost double the average person's ability to think up good ideas. More specifically it shows that those who have taken these courses are able to average over 90% better in production of good ideas than those who haven't taken such a course.

In these courses, lecturing is kept at a minimum, and no attempt is made to memorize materials. The classtime is mostly devoted to practice, with all students participating.

As we explore the subject of creativity, and plan experiences to help individuals grow and develop into imaginative, innovative human beings who are making fuller use of their human potential, we might keep these factors in mind:

1. Creativity is developed through sensitivity in perception and comes from being open to experience. This might be accomplished by encouraging an individual to retain and expand his awareness and sensitivity.

2. Creativity grows through the opportunity to experiment and explore.

3. Creativity is stimulated through imaginative and original thinking.

4. A good self-concept is a necessity for creative growth.

5. Creativity increases through expression of feelings and perceptions. Communication of creative expression increases in value.

6. Creativity is curiosity, a desire to know and experience many things.

7. Creative expression must be encouraged and provided for. An individual needs opportunity to present creative ideas in visual forms.

8. Creative ways of learning have a built in power of motivation—the process only has to be encouraged.

Creativity is discouraged in an environment where every individual is assigned enough activities to fill each class period. Teachers are more comfortable with this type of classroom control and can more easily observe correct behavior and measure physical results in terms of tasks completed. It is difficult to manage thinking and even more difficult to measure it; therefore, teachers may be apprehensive about allowing any time for such abstract activity. Under such conditons, they cannot expect any innovations, since applied creative effort demands time and thought.

Keys to richer awareness depends on developing one's capacity. Awareness is developed through daily stimulation and practice. Giving the person time to assimilate and evaluate an experience will let him perceive in more detail and move through it at his own pace.

We can provide experiences that let the other person discover things within the experience for oneself. He should be allowed to perceive the world in his own way. Experiences using the senses should involve things that are common to the individual.

"CREATIVITY IS A PROCESS OF INDIVIDUAL EXPERIENCE WHICH ENHANCES THE SELF. IT IS AN EXPRESSION OF ONE'S OWN UNIQUENESS. TO BE CREATIVE THEN IS TO BE ONE'S SELF."

Michael F. Andrews

Creativity seems to depend upon: (1) time; (2) a background of related experience; (3) the development of an urge to express oneself; (4) the accessibility of a variety of materials; (5) a permissive atmosphere for creative work; (6) a teacher who has had experiences in creative activities. Creative learning experiences may be increased if teachers:

—try constantly to help students enjoy freedom with self-discipline and self-responsibility and give credit and encouragement to students

—provide a rich stimulating environment as an essential basis for creative expression

—encourage risk taking

—offer a choice of assignments to meet different interests of students

—point out variety in the raw materials from which creativity must come, whether these be human relations, applied science experiments, or proportions in art forms

—provide for individuals' and groups' quiet as well as active periods in class and give the individual not only freedom, but privacy for developing his ideas

—use a variety of media and methods to stimulate interest and involve the use of more of the five senses

—provide for individual differences

—respect questions of curiosity and ideas that are presented for consideration

—conduct brainstorming sessions

—encourage opportunities for practice, experimentation, invention, and self-evaluation without grading

—provide opportunities for the person to produce and test ideas on his own. Encourage the student to act spontaneously, to judge for himself, to participate in the life about him, to explain what he sees, to defend his own ideas, to practice making decisions, to learn how to orient himself, to plan his days, to invent, and to feel at once the excellence and the responsibility of free action. Binet (1909)

—conquer tendency to associate goodness with conformity

We have an excellent opportunity in our conferences to help each student to develop in creative

ways. Carl Rogers suggests three criteria for establishing psychological safety for a potential creator. These suggestions are: (1) accepting the individual as of unconditional worth; (2) understanding emphatically (3) providing a climate in which the focus of evaluation lies within the individual rather than outside of him.[1]

If learning is to be truly innovative and if an individual is given the opportunity to discover, the skills of investigation should become a vital part of what takes place in every classroom. A classroom climate which challenges, maybe even perplexes students, provides the motivation for learning. It should not, however, be carried to the point of destructive frustration, confusion and defeat.

What is your self-concept as a creative person? Are you more open and responsive to your own experiences? You will need to develop your own awareness and sensitivity. If you maintain a creative outlook you will help others to do the same. Use the checklist on the proceeding page to determine how creative and innovative you have been in your teaching.

It is hoped that you will find something in this booklet that will encourage your own imagination. It takes all of the ingenuity any teacher can "muster" to encourage constructive, productive creativity in the classroom. This material is designed to add excitement and increased purpose to your teaching as well as to the living and learning of the young people whom you teach.

One final thought before beginning the unit, keep your teaching simple enough for Tom, Mary, Dick and Jane to understand. If you keep your teaching simple many more students will enthusiastically put the learnings to ever greater use, for their own good and for the good of the nation and the world!

[1] Rogers, Carl R., **On Becoming a Person,** Houghton Mifflin Co., 1961, pp. 357-358.

BOY, I ENVY YOU. YOU DON'T HAVE TO THINK

TEACHER'S SELF-EVALUATION SHEET

Below is a group of characteristics listed on a series of a continuum which show growth away from less-creative toward more-creative teaching. Place a check on the continuum where you think you are at this stage of your thinking.

THE GROWING, CREATIVE TEACHER MOVES

1	FROM	5	TO	10
	Rigidly planned programs		Flexibility in program	
1		5		10
	An autocratic classroom atmosphere		A democratic classroom atmosphere	
1		5		10
	Teacher-centered classroom instructional methods and techniques		Use of ideas and techniques for individualized instruction and more direct manipulative-discovery experiences	
1		5		10
	Encouraging conformity		Planning for development of individuality	
1		5		10
	Seeing creativity as creative arts to be taught in isolated class periods		Seeing creativity as a quality to be developed in all areas of curriculum and as a creative problem solving method	
1		5		10
	Seeing creativity as a talent which a few gifted individuals possess		Seeing creativity as an inborn quality which can be drawn out by setting proper conditions in the classroom	
1		5		10
	Seeing the creative student as a nuisance		Seeing the creative student as an exciting challenge and important person	
1		5		10
	Evaluating student's work as final		Seeing student's work as a step in the process of creative growth	
1		5		10
	Seeing the curriculum as a means of making junior artists and poets		Seeing the curriculum as a means to develop creative decision making (passing judgement, choosing, selecting, perceiving, analyzing, flexibility and fluency of ideas)	

1	5	10
Seeing creativity as a frill to the curriculum; an addition		Seeing creativity as the core to the curriculum; an essential to inspired learning
1	5	10
Stressing competition		Stressing cooperatively working together
1	5	10
Making plans by one's self and imposing direction on students		Involving students in co-operative planning
1	5	10
Stressing conformity		Free expression and a willingness to try new ideas

Adapted from:

Smith, James A., **Setting Conditions For Creative Teaching In The Elementary School**, Allyn and Bacon, Inc., 1966, pp. 196-198.

LEARNING PACKET 1:
UNEXPLORED TERRITORY

Performance Objectives:

1. After exploring ideas on creativity, write a statement giving at least three specific ways in which your concept on creativity has changed.

2. Use at least two techniques found in the student section to help further develop your individual creativity.

3. Using the suggested format in the student section begin keeping a notebook of your creative ideas. This will be continued for the entire unit.

Generalizations:

1. Perceptions are based on past experiences and one's purpose and attitude at the moment.

2. Creativity is the capacity to innovate, invent or reorganize elements in ways new to the individual.

3. The urge to be an individual and to create is a need leading to self-fulfillment.

4. From the search into one's self and the discovery of one's talents creativity can emerge.

5. To be alive is to be involved with life, and this means being committed.

6. Creativity usually means combining, relating and reorganizing materials and ideas in different ways to achieve something different, to do something in a different way to achieve new combinations.

7. Feelings of accomplishment contribute to self-esteem.

8. An individual is born with a personal potential to be great at something, to do more with his life, to be someone special.

9. The society and the world can be improved by developing the individual potentiality and social responsibility of every person.

Suggested Learning Activities:

(For either class or individual activities)

1. Complete the Pre-Assessment, "What Is Your C.Q."?
2. Listen to the cassette tape or read the narration, "Unexplored Territory."

3. Carry out "Warm-up Exercises"—one per day for the length of the unit.

(Class activities)

4. To develop awareness have each class member look around the room for five minutes. Answer these questions. What do you see that could be imporved? How would you do it?

5. To practice combining and relating ideas give each class member a paper sack filled with a variety of miscellaneous materials, with instructions to "create something." Allow five minutes for the exercise.

6. Discuss this statement: "All scenes in nature are worth looking at, but not all people have the ability to appreciate them." —Ralph Waldo Emerson— To develop awareness provide each class member with something from nature such as: bark from a tree, weeds, sea shells, jagged rocks, flower pods. After examining it closely, create a design from what you see.

7. To see design possibilities in unexpected places, have class members examine various items, such as: fibers, bacteria, food, hair and dirt under a microscope and create a design from what they observe.

8. To become more aware, view slides or pictures of clouds, rocks, trees, piles of boards, animals, bird in flight, ocean waves and have them describe what they see.

(Individual activities)

9. Carry out "Doodle Design" Activity.

10. Using the "Blotto" which you created either write a description of what you see or draw something you see in the design (student section number 1 - F).

11. Complete the "Idea-Starter" Technique (student section number 1 - F).

Instructional Materials:

For class activities

1. Script or cassette tape, "Unexplored Territory"
2. Collection of materials found in nature
3. Paper bags filled with a variety of materials to assemble creatively
4. Slides or pictures of designs found in nature
5. Slides for microscope activity
6. Bulletin board: (1) "Awareness"—pictures of beauty all around (man-made, natural)

For individual student activities

1. "What Is Your C.Q.?" (Number 1 - A)
2. "Let Your Imagination Go!" (Number 1 - B)
3. "My Thoughts on Creativity" (Number 1 - C)
4. "Doodle Designs" Activity (Number 1 - E)
5. "Idea-Starter" Technique (Number 1 - F)

Equipment for class activities:

1. Tape recorder
2. Microscope
3. Slide projector
4. Screen

Further References:

Teacher References:

Baker, Samm S., **Your Key To Creative Thinking,** Harper & Row Ed., Bantam Books, 1964.

Murphy, Dennis, **Better Business Communications,** McGraw-Hill Book Co., Inc., 1957; Ch. 3, "Creative Thinking"; Ch. 5, "Observing."

Student References:

Forum, "Creative Decision Making," Fall/Winter, 1973, J. C. Penney, pp. 3-7.

NARRATION:

UNEXPLORED TERRITORY

YOU ARE MORE CREATIVE THAN YOU THINK

I can hear those wheels turning inside of your head. "Oh, yes," you're thinking, "and just how do you know that I'm more creative than I think? Besides, everyone knows that I never have any terrific ideas when we're planning for a school or community activity or if I have to do the decorations for a banquet or luncheon."

"CREATIVE, HA!" Well, you are, and you really should give yourself more credit for having creative abilities and talents.

Let's explore this idea of creativity, and when we have finished, I hope you will begin to see why I say you are creative. The exercises that you will be asked to carry out could prove to be some of the most exciting adventures that you have ever embarked upon. You will have the opportunity to discover the "you" that is trying to express itself. Until recently, people took it for granted that a person was either creative or not creative, and nothing could be done about it. Now we know that creative abilities can be cultivated just like learning a hobby, sport or subject.

Does the word creativity cause you to think in terms of great artists, musicians, writers or scientists? Few of us realize that we all have the power to be creative, and seldom would you think of creativity in terms of yourself or most of your friends or your family.

One girl used her creative thinking abilities to solve the problem of what to do for Mother's Day. She was flat broke and felt terrible because she couldn't buy her mother a gift. She thought and thought, and suddenly, a brilliant idea came to her. At least she thought it was brilliant, and it certainly pleased her mother. She made up a little coupon book which gave her mother so many hours of her time and her ability to be used to help around the home. She ran errands, made a dress for her mother, babysat with her sister. Well, you get the idea, don't you?

Do you realize that most of us are involved in creative experiences and activities every day? Have you ever been talking to someone when suddenly, a "fantastic" idea pops into your head? Perhaps you get a new thought while vacationing or just before you drop off to sleep. One method of capturing those ideas before they escape is to keep a pad and pencil handy. Without keeping that pencil and paper with you, you are like the photographer walking through the woods without a camera. If you haven't a camera handy, you're certainly not going to get that perfect picture. This method can also be used while listening to speeches or when you are attending meetings to record ideas that others present. This will insure that good ideas you may want to use later are not lost.

LEARN TO VALUE YOUR IDEAS

Glen Flieschmann kept a notebook of his ideas for several books he wanted to write. Believe it or not, he had seven of them in progress at one time. Each time he thought of something for one of his stories, he would quickly write it down. One day, he had one of those books almost written. The book was finally published and now he has another one nearly completed and ready to be sent to the publisher. He wasn't a creative genius. He simply knew how to give value to his ideas and how to keep track of them so that he could find them when he needed them. Wouldn't you say he believed in his ideas?

REMEMBER NOT TO LIMIT YOUR POSSIBILITIES

Sometimes new ideas can be found by looking around and searching in unusual places. Are you aware of the possibilities all around you? If you want

to increase your awareness, learn to look and respond to what you see.

When you see a pile of boards all stacked up, can you see a shape or a design in them? When threads are dropped on the floor, or an orange is cut, can you see a design in that? What designs and patterns can you see as you watch rippling water?

Stop for a few minutes and turn to the "Blotto" exercise in the student packet. Describe what you see in your ink blot or if you can, draw designs that you see in it.

Welcome back. After completing the exercise, do you agree with Dr. Bruno Furst, "Most people have remarkably poor powers of observation."?

We all assume that an artist is a creative person, but did you know that it is also possible to be a creative carpenter, salesperson, lawyer, teacher, secretary or parent? Each vocation has its creative personalities. Without creative individuals, the school, organization, company and country would cease to move forward, to grow and expand.

CREATIVITY—WHAT IS IT? WHAT DOES IT REALLY MEAN?

Creativity is invention, discovery, curiosity, experimentation, originality, and imagination. We could even say it is thinking in new combinations. Actually, very little is completely new. Creativity usually means combining, relating, and reorganizing materials and ideas in different ways. This is done to achieve something different or to do something in a different way. There is very little in this world which could not be improved with new and different ideas, so don't be afraid of wild ideas—well, creative wild ideas that is! Creativity—it's using your talents and abilities to get what you want. It's "doing your own thing."

MANY POSSIBILITIES EXIST EVEN IN TODAY'S WORLD. THESE POSSIBILITIES ARE JUST WAITING TO EMERGE FROM YOUR CREATIVE MIND.

There is perhaps more amateur art practiced today than at any other time in our history. As an example, consider those quaint little shops where you can find a treasured piece of hand-made pottery, a one-of-a-kind piece of jewelry which you just know was designed for your own unique personality. There is also that intriguing boutique around the corner which is filled with patchwork pillows, gowns and quilts; knitted vests; macrame bags, wall hangings, belts and rings. Yes, I said macrame rings.

As a beginner, you shouldn't try to compete with professional artists to sell your work or win prizes, although this certainly might be a goal for which to strive. Just because you don't get your name in lights, you shouldn't assume that you have no ability and that you're not creative. You may not always get recognition for what you've done but doing something productive can make you feel good about yourself. The true reward for the amateur is doing creative work for pleasure and for personal satisfaction. Whatever your talents and abilities, you'll find life more fun, more interesting, more satisfying and more productive when you apply them creatively.

IT IS IMPORTANT THAT YOU DEVELOP YOUR CREATIVITY

Perhaps you are asking yourself why is it important that I develop my creative abilities? Let's think about these two questions.

1. Would you like to feel better about yourself?

2. Would you like feel more important?

The need to grow and create is basic in each individual. Results of not using your potentialities, your abilities and your talents might be unhappiness, frustration or lack of meaning for your life. This may lead to aggressive personality traits, poor mental and physical health or restlessness.

It doesn't matter where in the world we live, what our race or background, we have been given potential talent or ability in some area or field. Many of us, however, are inhibited. We have our creativity blocked. We've lost our sense of wonder. Our curiosity has been killed, and we no longer look around us with a feeling of excitement and expectation. We close our eyes and our ears and don't really see or hear. We don't try to see possibilities in things.

YOU WERE BORN WITH A PERSONAL POTENTIAL TO BE GREAT AT SOMETHING, TO DO MORE WITH YOUR LIFE, TO BE SOMEONE SPECIAL AT SOMETHING.

To have the feeling and to think of yourself as important you must have accomplished something, no matter how small. You should feel that you can do something a little better with a little less effort than the other fellow. As you learn how to approach and solve many daily problems and master challenges, you will grow more self-confident. You will begin using more of those hidden talents and abilities.

THE FUTURE OF OUR CIVILIZATION DEPENDS UPON THE QUALITY OF THE CREATIVE IMAGINATION OF OUR NEXT GENERATION.

Another very important reason why you should develop your individual abilities concerns our cities. They are threatened with chaos to the degree that groups and individuals ignore one another, and show no care or concern for others' problems. There are no simple solutions to urban problems, because modern cities are not simple places. We must find solutions that respect human differences and talents—solutions that will take into consideration the problems of ecology and cultural differences.

It's important to our society that our abilities and talents be identified, developed and used. Democracies collapse only when they fail to use intelligent and imaginative methods for solving their problems. Socrates warned Greece, but they didn't heed his warning. Gradually that "Golden Age" became tarnished and finally disintegrated.

Ralph Waldo Emerson summed it up by saying, "The true test of a civilization is not the census, not the size of the cities, not crops, but the kind of man the country turns out." Recognize that the world or society is no better than the individuals in it. The world will become better only if and when we develop the individual potentiality and social responsibility of every person.

Let's review the ideas that have been presented in this discussion.

1. You are more creative than you think. You are more creative than you or your family and friends give you credit.

2. We are involved in creative experiences every day.

3. You should keep a pad and pencil with you to jot down ideas whenever you get a "creative flash". Remember, those brilliant ideas come and go very quickly.

4. Learn to value your ideas.

5. Don't limit your possibilities for creative ideas. New ideas can be found by looking around you and searching in unexpected places.

6. Doing something productive can make you feel good about yourself.

7. Creativity is invention, discovery, curiosity, experimentation, originality, and imagination. It's forming new ideas and thinking or doing something new.

8. Very little is completely new. Creativity usually means combining, relating, and reorganizing new materials and ideas in different, ways, to achieve something different, to do something in a different way, to achieve new combinations.

9. To have the feeling and to think of yourself as important, you must accomplish something, no matter how small.

10. You were born with a personal potential to be great at something, to do more with your life, to be someone special at something.

11. You can help make this world a better place by using your talents and abilities to help solve some of society's problems.

"TO FURTHER THE APPRECIATION OF CULTURE AMONG ALL THE PEOPLE, TO INCREASE RESPECT FOR THE CREATIVE INDIVIDUAL, TO WIDEN PARTICIPATION BY ALL THE PROCESSES AND FULFILLMENT OF ART—THIS IS ONE OF THE FASCINATING CHALLENGES OF THESE DAYS."

John F. Kennedy

CREATIVITY

Ethel Miller

Some folks are creative in art;
With others a verse says it better;
And then there are those
Whose creativity shows
When they sit down to write you a letter.
Some create beautiful music;
While others interpret a song;
Some change a hymn
To contortions of limb,
And some play it all with a bong!

Some are creative in cooking;
While others express it in dress;
Some have a flair
For stacking their hair;
This, too, is creative, I guess.
Some like to tinker in workshops,
In metals or woodwork or glue;
Or mold something nice
From a block of pure ice,
And then add a colorful hue.

To each this expresses her feelings,
But to each in a different way;
God gives to each one
A way to have fun,
In work, as well as in play.

Miller, Ethel, "Creativity", **Delta Kappa Gamma Bulletin**, Summer 1966, Vol. 32, No. 4.

WARM-UP EXERCISES

It is suggested that the class members do one exercise per day for the length of the unit. These exercises can serve as "Creative Thinking Stimulators."

1. Take 3 minutes and write down as many ways as you can think of to use a rock.

2. Which advertising slogans come most readily to mind? Which product or service is each associated with? Write an advertisement and design one for selling a product of your choice.

3. To become aware of future problems and situations based on your knowledge of the present, forecast as to trends, future conditions and possible solutions.

   What will our city be like 50 years from today?

   What kind of water supplies will we need?

   What kind of transportation will we be using?

   What will our school buildings be like?

   What jobs will we have?

   How will our government change?[1]

4. Think up titles for 5 new songs.

5. What interesting new events could be added to a track meet?

6. Write down the title of the last movie you saw. Now write down 5 other titles you think might have been used. Note this could be done using a T.V. series title also.

7. List as many improvements as you can think of which would make a textbook more interesting and appealing to teenagers.

8. Think of 5 ways to increase the school spirit at our school.

9. Name five creations which the world could use to advantage which have not been invented yet.

10. What improvements in a school bus would you suggest for the comfort and convenience of you and your friends.

11. Write 5 imaginary headlines that you would like to see in tomorrow's newspaper.

12. "What color is Saturday?" Why does this color represent your feelings and/or ideas about Saturday?

13. Write a news article by a famous person of ancient history. Tell about events happening in your country at the time.

14. Make up a factual travel guide to encourage visitors to come to your state.

15. Design a poster to be used by your State Travel Bureau.

16. Name your "pet peeve" then figure out how it might be eliminated.

17. Describe the best idea you ever had and tell how it would be useful.

18. Suppose someone gave you 10,000 typewriter-ribbon spools. What uses can you devise for them?

19. Your assignment is to describe a door and a window to someone who has never seen them. How would you describe the difference between a door and a window? How does one avoid vagueness in comparing two or more items.

20. Pretend that you are an insect, animal, bird or fish. Write a brief description of a morning in your life.

21. The family wants a change from just plain vegetables for dinner; what would you serve to give them more variety?

[1]Adapted from: Talent Ignition Guide, p. 38.

22. A couple in a one-room apartment needs a desk, a bookshelf, and a serving table, yet hasn't room for all of them; how would you solve this problem?

23. Many women wanted something better than the old-fashioned metal vegetable grater, because the food scattered over the dish or bowl onto the table surface. How would you meet this challenge?

24. A woman wants to read all the latest books, and likes owning books. Yet she feels she can't afford to buy them all, and doesn't like waiting her turn for weeks and months at the local library; what can she do?

25. A creative manufacturer has developed a mending tape with a remarkable adhesive on the back. Applied to many different types of fabrics, the tape can mend a crack, hold or tear instantly. The big problem is to present so commonplace an item as mending tape so it will attract special attention and will become a popular item with home sewers.

26. Women wanted lipsticks in many shades. But an alert manufacturer challenged himself this way. "How can I make sure women will buy my lipsticks in all the shades?"

As a teacher you may want to use your imagination to add to this list of "Warm-up Exercises."

LEARNING PACKET 2:

IS YOUR CREATIVITY SHOWING?

Performance Objectives:

1. Given a checklist, "Characteristics Which Are A Clue To Creativity", analyze yourself for your creativity traits.

2. Carry out the "Free-Wheeling" Exercise which has been provided.

3. Begin recording your "talent show-throughs" on a worksheet "Your Talents Are Showing."

Generalizations:

1. To be creative means to experience life in one's own way, to perceive from one's own view point, to draw upon one's own resources, capacities, and environment, and face life directly and honestly.

2. Only from the search into one's self can creativity emerge.

3. Every person wants to move forward, wants new experiences, wants to grow.

4. An imaginative, searching attitude characterizes a creative person.

5. The more ideas presented, the more unusual they become.

Suggested Learning Activities:

(For either class or individual activities)

1. Listen to the cassette tape or read the narration, "Is Your Creativity Showing?"

(Class activities)

2. Select one of the following famous personalities and analyze the differences in traits they possessed as compared to the "average" person. Report to the class.

   a. Thomas Edison–Inventor
   b. Frank Lloyd Wright–Architect
   c. Thomas Jefferson–Statesman
   d. Socrates–Philosopher and Teacher
   e. John Dewey–Educator
   f. Norman Rockwell–Artist
   g. Eleanor Roosevelt–First Lady
   h. Madame Curie--Scientist
   i. Coco Chanel–Dress Designer
   j. Beethoven–Composer
   k. Hemingway–Author
   l. Martha Graham–Dancer

   The class could develop its own list of "Characteristics Which Are A Clue To Creativity" based on the biographies that were reported on in class.

3. Role play contemporary "idols" exchanging ideas on philosophy of creativity and living with artists established in their fields. Some suggested persons:

   a. Folk singer Carole King talking to Beethoven at a party
   b. Young dress designer Betsy Johnson visiting with Coco Chanel
   c. Musician and composer Burt Bachrach and George Gershwin
   d. Others can be added to this list

(Individual activities)

4. Describe in written or oral form the most creative person you know. Include the following information: personality traits: what does he do well? How does he manage his time and energy? What is his social, economic, and cultural background? How old is he? What has he done that makes you feel he is creative?

5. Carry out the performance objectives:

Instructional Materials:

For class activities

1. Cassette tape or narration, "Your Creativity Is Showing"
2. References containing biographies of famous people listed in class activity number 2
3. Role playing situations written out

For individual student activities in the student section

1. "Characteristics Which Are A Clue To Creativity" (Number 2 - A)
2. "Free-Wheeling" Exercise (Number 2 - B)
3. "Your Talents Are Showing" (Number 2 - C)
4. "The Most Creative Person I've Known" (Number 2 - D)
5. "Creativity Benefits" (Number 2 - E)

Equipment:

Cassette tape recorder

Further Reading References:

Teacher References:

Baker, Samm S., Your Key To Creative Thinking, Harper & Row, Ed., 1962; Bantam Books, 1964.

Student References:

Gaier and Dallas, "Creativity and The Creative Process," Forum, Fall/Winter, 1973, pp. 20-21.

NARRATION:

IS YOUR CREATIVITY SHOWING?

ARE YOU A "SOMEDAY-I-AM-GOING-TO TYPE OF PERSON?"

Well, get out and do something about it! As Lucille Ball says, "If you are going to do it, do it." Don't be afraid to jump right in! Don't be afraid to be different! If your life is going to be interesting, if you are going to enjoy the excitement of meeting a challenge, then you must be willing to try doing things in a little different manner.

An important statement to remember is, "A little difference can make the difference." Demand something for yourself. If you want more recognition than you are now receiving, dare to try. Did you know that the difference in times between some of the gold medal champions and the bronze medal champions at the Olympics was only seconds? Sometimes as little as split seconds?

A LITTLE DIFFERENCE CAN MAKE A LOT OF DIFFERENCE

Before acting on decisions, pause for a moment and see if you can think of a better way that is just a little different from the way that everybody else might do it. But one word of caution—don't be different just to be different. Be practical in your thinking.

Try to do something different, or meet someone who is different each month. Become acquainted with creative people. Maybe it will be someone who has a hobby that you would like to know more about. Seek hobbies that appeal to you. They will help to channel your interests and abilities into pursuits that produce not only pleasure but also solid results for you. Apply yourself to an absorbing hobby even for an hour or two at a time. You will find that this creative approach will really give more zest to your life.

An important part of becoming more creative is that you become more interested and more interesting. Creative people are more interesting because they have more complex personalities. They are non-conformists, have a wider range of interests, great curiosity and a high degree of sensitivity and awareness. If you want to develop into a more creative type of person, practice listening and discussing problems with others which will help you in solving your problems more creatively.

Another way to make your life more interesting is to be willing to break old habits. Examine your daily activities and see where you can make your day different and more interesting. Determine your purpose and set goals to achieve that purpose, then make it a daily habit to attain those goals.

CREATIVE LIVING STARTS NOW

Would you call yourself a creative person? One study of leaders showed certain characteristics are usually apparent in a creative person. No person has all of them, but to be a creative person this study suggests that you would have most of them.

A number of elements that contribute to a creative person has been discussed, but these ten seem to be fundamental and essential.[1]

"1. Desire: Provides the spark that moves you to use all the other characteristics and face each problem. It is wanting to make things better for yourself and others by improving upon the solution or goal and finding ways to make things better.

2. Alertness: Being aware of everything that is going on around you. It is noting everything that is happening to you and around you.

[1]Baker, Samm S., **Your Key To Creative Thinking,** A Bantam Book published by arrangement with Harper & Row Publishers, Inc., 1962, pp. 27-29.

3. Interest: The desire to dig deeper into a problem or a subject. Excitement and enthusiasm for the subject which provides the incentive for you to study it in depth.

4. Curiosity: Asking questions, examining all sides of the problem, situation, or item encourages a spirit of inquiry.

5. Thoughtfulness: This leads to a thorough understanding as you view all aspects of the problem or situation as you give it your complete attention and interest.

6. Concentration: This element is closely related to thoughtfulness. It refers to the ability to focus your interest and thought and keep it focused as you look for and study the problem, situation or item in detail.

7. Application: Applying effort and energy to the task as you work steadily and industriously. In the words of Thomas Edison, "Genius is 2% inspiration and 98% perspiration."

8. Patience: Tenacity of purpose. It is "stickability." You "keep on keeping on" instead of settling for the simplest or first solution that seems to emerge. It is perseverance, the ability to stay with a problem until you are satisfied that the best solution has been found.

9. Optimism: Combine enthusiasm, self-confidence and a positive attitude as you try to find creative solutions to your problem, goal or situation.

10. Cooperation: Accept views and suggestions provided by others and make modifications which will make ideas more workable, useable and practical. This is also the desire and willingness to share your creative ideas with other."

To begin to develop a creative attitude, answer this question honestly—do you have the capacity to be puzzled? The capacity to be surprised? Do you let yourself get excited, elated or enthusiastic? Are you industrious? Do you sizzle? In other words, are you alive?

If you want to improve your creativity characteristics you might begin be reviewing the list just discussed. After re-reading them try putting the trait that needs the most improvement on a card then work on this characteristic until you feel that this trait is part of your personality. If you will continue this procedure you will increase your own creative abilities.

LIFE SHOULD BE A GROWING ADVENTURE

In our American society people often live with boredom or anxiety rather than adventure! The imaginative searching attitude will not only help make you a creative person but will make all of living more excitable to you. A truly creative person finds new answers to needs that were previously non-existent. Consider this example. People didn't think that they needed a telephone or phonograph, stereo or even an 8-track tape recorder before they were invented. Your creative approach, therefore, will include problem seeking as well as problem solving. In other words, find a need and fill it. This is the first step in the creative process. Creative thinking can become a natural part of your process and daily progress, starting now and benefiting you through all the years ahead.

It has been said the more ideas you think of, the more unusual they get. If you want unusual ideas, then you must think of more ideas. There is an exercise in your packet called "Free-Wheeling." Like any other habit, creative thinking requires work and exercise to develop it. So let's take time to complete this exercise, but before you turn to the "Free-Wheeling" exercise, let's review the ideas presented in this discussion on the creative personality.

1. If your life is going to be interesting, if you are going to enjoy the excitement of meeting a challenge, then you must be willing to try doing things in a little different manner.

2. Examine your daily activities, and see where you can make your day different and more interesting. An important part of becoming more creative is that you become more interested and more interesting.

3. Creative living starts now! Give it a try! Don't be afraid of your wild, creative ideas.

4. A little difference can make a lot of difference!

5. An imaginative searching attitude will help make you a creative person. It will also help to make living more exciting for you.

6. Your creative approach will include problem seeking as well as problem solving. Find a need and fill it.

7. Remember these ten key creative elements:[1]

   a. Desire
   b. Alertness
   c. Interest
   d. Curiosity
   e. Thoughtfulness
   f. Concentration
   g. Application
   h. Patience
   i. Optimism
   j. Cooperation

8. The more ideas you think of, the more unusual they get. If you want unusual ideas then you must think of more ideas.

9. Creative thinking requires work and exercise to develop it.

In closing, let's not forget we are not concerned here with creativity in art, music or literature, but with the basic creative thought, action and problem-solving in everyday living. Everyone has imagination, but you must learn how to use it more productively. It may take the form of art, music and literature, but it may also manifest itself in a scientific form such as chemistry, physics, mathematics, space exploration, psychology. It may also be exhibited in education through new methods, new curriculum, new techniques, through investigation of psychology of learning and solving of problems in society and government.

Opportunities are unlimited. What is your particular interest and talent? Let your imagination go! You are creative! Move on to that wonderful adventure—the discovery of your interests, hidden potential and talents.

[1]Baker, Samm S., **Your Key To Creative Thinking**, A Bantam Book published by arrangement with Harper & Row Publishers, Inc., 1962; pp. 27-29.

"ABILITY AND NECESSITY DWELL NEAR EACH OTHER."

Pythagoras

LEARNING PACKET 3:

BLOCKS TO CREATIVITY

Performance Objectives:

1. After completing the puzzles and quizzes, examine yourself in relation to the "Creative Thinking Blocks." Examine your performances and as carefully as possible determine how and to what extent each block tends to influence your performance.

2. Develop as many ideas as you can for eliminating off-setting or overcomimg each of these Blocks and/or its effects. Begin to put these ideas into practice.

Generalizations:

1. Under threat, the self is less open to spontaneous expression. When free from threat, the self is more open and free to strive toward actualization.

2. Creative inhibitors keep us from using more or all of the "Creative Thinking" potential we possess.

3. A useful idea is usually accomplished after many inadequate ideas have been generated and considered.

4. Lack of motivation inhibits creative endeavors.

5. Procrastination blocks creativity.

6. A quiet, secluded, undisturbed location is conducive to creative thinking.

7. Emotions and attitudes presented in an individual's environment and in the person can stimulate the individual to great achievements.

8. An environment that provides praise for originality and accomplishments encourages creativity.

9. Too much criticism too soon in a creative endeavor stifles the production of ideas.

Suggested Learning Activities:

(For either class or individual activities)

1. Listen to cassette tape or read narration, "Blocks to Creativity."

(Class activities)

2. Discuss this question. When there is only sufficient time to modify what now exists, what is your usual procedure for handling the matter?

3. Discuss this statement: "Becoming emotionally involved in the defense of our ideas is fatal to their acceptance." How can we deliberately avoid such involvement?

4. As a class project have each class member present a new idea to friends and families. Compile a collection of typical reactions to the new idea.

5. As a class activity role play to distinguish between "judicial thinking and creative thinking." The purpose of this exercise is to make class members aware of the inhibiting factor of criticism of ideas during a brainstorming session. The direction for carrying out this activity can be found on pages 22-23.

6. Role play the following situations: family members discourage another member's creative endeavors. A family member encourages another family member's creative project. A friend makes fun of another's big ideas concerning his future plans. Discuss why discouragement is so detrimental to "creative ideation."

7. Read and discuss essay "On Creativity."

(Individual activities)

8. In written or oral form identify something not capable of improvement and justify your position.

9. Try to complete "Brain Teasers" exercise (student section number 3 - F).

10. Complete "Mind-Stretchers" exercise and "Judgment Test" (number 3 - D & number 3-A).

11. "The Mystery Material" (student section number 3 - E)

12. Carry out performance objectives.

Instructional Materials:

For class activities

1. Cassette tape or narration: "Blocks To Creativity"

2. Develop a new idea for class project to survey family and friends

3. Instructions for "Judicial Thinking" exercise and "Brainstorming" exercise, pp. 22-23.

4. Poem, "On Creativity", p. 21.

For individual student activities

1. "Judgment Test" (Number 3 - A)

2. "Dig Deeply Technique" (Number 3 - B)

3. "Creativity Blocks" (Number 3 - C)

4. "Mind Stretchers" Exercise (Number 3 - D)

5. "The Mystery Material" (Number 3 - E)

6. "Brain Teasers" (Number 3 - F)

7. "How Would You React?" (Number 3 - G)

Equipment:

1. Cassette Tape Recorder

Further References:

Teacher References

Parnes, Sidney J. and Harding, Harold F., (Eds.), **A Source Book For Creative Thinking**, Selection 9, "Emotional Blocks to Creativity," A. H. Maslow, pp. 93-103; Selection 10, "Obstacles To Creativity," Melvin Tumin, pp. 105-113.

Taylor, Jack W., **How To Create New Ideas**, Prentice-Hall, Inc., Ch. 4, "What's Holding Us Back?" pp. 11-47.

Von Fange, Eugene, "Convince Others," **Professional Creativity**, Ch. 15, pp. 205-215.

Weiss, W. H., "Be Creative!", **Supervision**, Vol. 35, No. 5, May 1973, pp. 3-5.

NARRATION:

BLOCKS TO CREATIVITY

What cramps creativity? Why do some people appear to be more creative than others? Why don't some people use their creativity more? Fear is one obstacle; fear of criticism from one's family or friends, fear of not doing well. Too much criticism too early in a creative project may kill one's enthusiasm.

Remember those times when you offered a suggestion in a group only to have the people pick your ideas to pieces even before they explored the possibilities? They are often the "it-can't-be-done" type of individual. Criticism too soon in a creative thinking process could destroy faith in your abilities. This is why the "Free-Wheeling" and "Brainstorming" techniques have proven to be so successful in business group sessions.

Some people underestimate the role of failure in the creative person. It can be the stepping stone to success. Everyone has failures sometimes, even the experienced artist, teacher, inventor and craftsman. A new idea calls for a new direction, and this exploration involves a certain amount of trial and error.

Thomas Edison certainly had his share of trial and error. He did over 3,000 experiments before he discovered the secret of the light bulb. After each of the 3,000 experiments he said he had found one more way not to do it again! Now that's what I call a positive attitude! Just think what that man contributed to the world.

The great men and women of yesterday, today and tomorrow all had dreams and ambitions. There is no magic to their success, only their ability to put their energy and potential to work. Who knows? You may be another Thomas Edison or Madame Curie.

Painters, too, often make numerous sketches before their final work, and architects draw many plans before the building is actually started. If you knew everything that was going to happen, wouldn't it become a very boring existence? Rather than worry about your trials and errors, why not look for the wonderful surprises which just might emerge as possibilities you hadn't even considered. We call this "serendipity."

TAKE OUR FAILURES AND BUILD SUCCESSES FROM THEM

Another obstacle to creativity is a negative attitude about yourself, others and society. A negative attitude makes you more pessimistic and you may think, "What's the use of trying? It won't turn out right anyway." Are you harboring that thought right this minute? If so, why not try turning your thinking around and think why it would work.

A third obstacle is doing things the same old way or in other words, being a conformist. This type of person is not willing to keep an open mind. He doesn't open his eyes and ears to explore new ways of doing things, to think in new combinations. If this person were shown a hammer all he could think to use it for would be to pound nails or pry up a board. They have a "fixation." They see the use of a given item as being for one purpose, to be used in one way. This blinds them to other possible applications. After thinking about it, how many different ways might you use that hammer?

PREVIOUS HABITS TEND TO HINDER PROBLEM SOLVING

When we are faced with a problem, any problem, a first attempt at solving it invariably consists of trying to dig up satisfactory solutions from old ideas, from past experiences, from memory. We frequently depend upon this method exclusively and this can lead us to becoming "robot-like", inflexible, and unimaginative. We call these "conceptual blocks," and they tend to channel our thinking narrowly in old directions, when the problem at hand calls for free, imaginative thinking. In the problem of the carpenter's hammer which was just mentioned, did you consider other possible uses such as rocker, heating instrument, anvil or measuring tool?

Another example of a "conceptual block" is called "focusing on the familiar." Suppose you wanted to invent the airplane when none had yet been invented. There were no textbooks or formulas for doing it. You would start and maybe stop by using the concept of the bird. It's amazing how many people in aviation today unimaginatively insist that the only proper place to put an airplane's wing is on top of the body. After all, whoever heard of a low-winged bird? To one extent or another, we all tend to focus on the familiar and try to use old concepts and ideas to solve new problems. This tends to lead us to wrong conclusions and failure because of our stereo-typed reactions—our conceptual blocks. So often we think a problem can be solved in a particular way, simply because our mind is set on one direction.[1]

Self-discouragement is another stifler of creativity and is totally unnecessary! Don't be afraid to advance ideas which others called foolish and were first greeted with sneers.

When Galileo invented the telescope thus opening up the skies to us, he was ridiculed, proclaimed a heretic and put into prison. Today we have benefited from his discovery and are now exploring the universe.

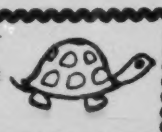
Westinghouse was told that his idea, using compressed air for brakes wouldn't work or be practical. It took 10 years for the industry to accept his idea.

People laughed at Fulton when he bagan to envision the steamboat, whoever heard of using steam for an engine? This list could continue on an on filling many pages. It appears to be a human trait to make fun of, sneer at, discourage unfamiliar ideas and more tragically persecute the individual who proposed them.

If we wish to encourage innovation, we must eliminate the practice of beating down, breaking, kicking and burying an idea or discovery the instant it is presented. Too often it is allowed to lie around for years while it is discussed, examined and eyed with suspicion and skepticism until an individual with courage again ventures forth!

Remember Galileo! He believed in his idea. He didn't bend to public and church pressure. When you begin to worry about the way people will look at you and accept your ideas, think about this saying! Put it on a card! Carry it with you!

BEHOLD THE TURTLE: IT MAKES PROGRESS ONLY WHEN HE STICKS HIS NECK OUT!



Close to self-discouragement is something else that we do to ourselves. We maintain a perfectionist attitude and this, too, can block our creative thinking. We tend to expect too much of ourselves. We have too much pride concerning our creative ideas to give them out. Don't be afraid that someone will laugh! After all, the more we try, the more ideas that we will collect. Often, a good idea is accomplished only after many inadequate ideas have been generated and considered.

SELF DISCOURAGEMENT, TIMIDITY AND PERFECTIONISM ARE STIFLERS

Take time out for a few minutes to do an exercise called the "Judgment Test." After you have finished the exercise and have scored yourself return to our discussion.

Did you find that sometimes you weren't very observant and that you made some very silly mistakes in taking this test? It is important to think and plan very carefully and be more aware and observant of what is happening around you in your world. Try to see the entire picture before making judgments and arriving at decisions.

Along this same line of thinking, we should consider the person who never digs deeply enough. He never explores in detail. He doesn't think the problem through very well. This person does superficial or surface thinking. Do you know that the patent office is flooded with thousands of ideas each year that won't work? The reason for this is that people simply will not take the time to work an idea out thoroughly enough.

There is a technique which you will find in your packet called "Dig Deeply." Choose one item from the list, examine it closely and then write everything you can about it. Describe its appearance, qualities, and its uses. In other words, dig deeply. Do the first part of the exercise for three minutes. This is a simple exercise at first but later you will have to apply "brain power". Pick a topic, investigate it, and research everything you can on the subject. When you have finished with this technique, we will resume our discussion.

Some people have a "loser's limp." They use handicaps as obstacles for not developing their potentials. However, some individuals will not use a handicap as an excuse to do nothing, but rather, see it as a challenge to do something. Examples of handicapped people who have developed their talents

[1]Taylor, Jack, **How To Create New Ideas**, p.45.

might include a group of deaf people performing in the theater, or an individual such as Beethoven who composed his Fifth Symphony after losing his hearing. Helen Keller was a great lady who, although she could not see or hear, graduated from college with scholastic honors and went on to become one of the most famous women in history.

ONE OF THE MOST COMMON OBSTACLES TO OVERCOME IS LACK OF MOTIVATION

Lack of motivation refers to the guy or a gal who just doesn't care. You know, the ones who usually have a low opinion of themselves, and many times, others as well. These individuals have no purpose for living, no goals. They are often unhappy and frustrated about life.

Have you ever watched people in a crowd at the State Fair as they worked their way through the exhibits? The next time you have an opportunity, watch for these three personality types. First, you may observe a very curious and interested individual who stands and studies each exhibit and gains much new knowledge through the study.

Over on the other side of the isle is one who glances quickly at each exhibit and thinks, "Yes, that's an exhibit, all right."

The real loser in this crowd in the one who can't even be bothered with going through the exhibits. This person is totally lacking in curiosity. Nothing interests him and boredom is his key word. One of these individuals remarked that he found the first moon walk telecast boring. The reason for this attitude is that he is bored with himself.

BOREDOM IS IN THE MIND OF THE BORED!

How can abilities be developed without gathering a rich background of information and without studying and observing? We must become aware of what is happening in the world around us and train ourselves to be observant. Develop a curious attitude about life. Don't be afraid to ask questions. Ask questions that begin with such words as "who," "what", "when", "where", "why", "which", "how", "what if", "suppose". Did you notice that these questions can help us to find some in depth answers?

Along with asking questions we can increase our knowledge by sharpening our listening skills. By learning to listen to what people are saying we can often gain information and knowledge of which we are not aware.

"Tomorrowitis" or procrastination can be a deadly inhibitor. It means putting things off. Why do so many of us do this? Is it because we fear failure or is the motivation lacking? Is it that we are not interested enough to devote the needed time and energy to the project?

The mind may seek almost any sort of excuse to avoid employing mental energy to the situation at hand. We are overcome by curiosity to listen in on a conversation nearby. A noise out in the street becomes an obsession. We can't rest until we find out what it is. We probably won't get much accomplished until we find a quiet, secluded spot where we can concentrate undisturbed.

Napoleon Hill stated in **Think and Grow Rich**, "The creative faculty of the mind is set into action entirely be emotions and not by cold reason." Some authorities estimate that the average person is about 80% emotional and 20% logical. This "emotion-mindedness" can keep us from being as creative as we are potentially capable of being. This statement may seem contradictory, but this further explanation may clarify it.

Emotions and attitudes presented in our environment and in ourselves can stimulate us to great achievements. But these same emotions and attitudes can also hinder or stop our advances. We can, through over-indulgence and concerns with trivialities start down-hill without even noticing it. On the other hand, by channeling our emotions into a creative vein we can rise to great heights of achievement.

MANY CREATIONS HAVE BEEN ACCOMPLISHED IN MOMENTS OF EMOTIONAL STRESS

Poor environment is another stifler to creativity. An environment where others look only for the bad in an idea does not encourage creative productivity. The environment should provide encouragement—encouraging you to read, investigate, explore and invent— and provide praise for originality and accomplishments.

Why do uncles, aunts and grandparents tend to give more encouragement than parents, brothers and sisters? One girl had an uncle who would always write her encouraging letters of praise, and words of wisdom. These always seemed to arrive at milestones in her life.

Upon entering high school she received these words of wisdom, "What you fill your mind with is what you will become. You have the choice—comic books and cheap novels or the great works of literature. On my next visit I hope to have the opportunity to discuss with you the books you have read." Needless to say she made an effort to read books worthy for discussion with the uncle she admired so much.

When she graduated first in her class another letter arrived praising her scholastic achievements. It also contained advice concerning career decisions. His words upon graduation from college were these, "If you want to be successful in your profession then you must go that extra mile and give full value to those for whom you choose to work. Are you willing to do the jobs that others hesitate doing or don't want to do? You have been given talents and potential which I hope you will use to the fullest. Be willing to put all of your efforts and talents into the accomplishments of your goals."

She has kept those letters in a special drawer where periodically they are brought out and read when criticism and discouragement begin to cause self-doubt. Her life is filled with a wonderful sense of adventure and enthusiasm because she is doing what she enjoys and wants to do. Her uncle provided the encouragement and the praise that inspired her! Each of us needs such a booster for self-confidence.

No stimulus to creativity is more effective for people than a good pat on the back! We should do anything and everything possible to encourage people to get more and better ideas. Within a family, praise is at its greatest premium. Parents should stop, look, question, listen before uttering the slightest criticism for a family member's creative effort. Priase is powerful when given face to face, but even more effective when spoken to others and overheard by the person.

Most parents are guilty of lack of encouragement or even worse of creating discouragement and self-doubt concerning one's abilities.

BE OPEN AND READY TO RESEARCH KNOWLEDGE NECESSARY FOR A SOLUTION

The attitude that all the knowledge that is necessary to have can be found in one or two textbooks is thoroughly ingrained in some people. We cannot afford to adopt this type of smug attitude. At the rate that information is accumulating today, can we ever know everything there is worth knowing in our particular field? We must remember that a receptive environment is essential if a free flow of new ideas is desired.

One final obstacle to creativity is poor health. Poor health can result from lack of sleep, lack of exercise, poor nutritional habits, chronic diseases, a negative attitude, and other psychological factors.

When a person is bothered by psychological factors such as worry, tension, emotional conflicts and anxiety, health is certainly affected and creativity is stifled.

If you doubt that poor health is a powerful block try this:

> Think back to the last time you had a severe headache, bad cold or tooth ache. At that time, how interested were you in performing simple, routine work, let along try to cope with difficult new problems?

IMPROVED HEALTH CAN HAVE A POSITIVE EFFECT ON THE JOB OF CREATIVE THINKING

Now let's see how many of the creativity obstacles you can remember. You will find a sheet in your packet to fill in as you review.

1. fear of criticism
2. fear of failure
3. negative attitude
4. conformity
5. not being observant
6. doing surface thinking, not digging deeply
7. a loser's limp, using handicaps as an excuse
8. lack of motivation
9. lack of curiosity
10. "tomorrowitis," or procrastination
11. previous habits or "fixations" and "focusing"; these are sometimes called conceptual blocks

12. self-discouragement, being timid and having a perfectionist attitude

13. emotion-mindedness

14. a poor environment—tradition and customs can also contribute to a poor or a stifling environment

15. poor health

There are many other obstacles but these are some of the major ones that seem to be quite common among people.

ON CREATIVITY

The man who follows the crowd, will usually get no further than the crowd. The man who walks alone is likely to find himself in places no one has ever been before.

Creativity in living is not without its attendant difficulties, for peculiarity breeds contempt, and the unfortunate thing about being ahead of your time is that when people finally realize you were right, they'll say it was obvious all along.

You have two choices in life: you can dissolve into the mainstream, or you can be distinct. To be distince, you must be different. To be different, you must strive to be what no one else but you can be . . . .

Alan Ashley–Pitt

President of Pitt Engineering Company, 1919–

JUDICIAL THINKING VS. CREATIVE THINKING

Creative thinking and criticism are not compatible. People create better in a permissive, encouraging atmosphere, in a favorable climate where positiveness and acceptance is displayed.

Conduct the following "brainstorming" Experiment with the class.

Step 1 Divide the class into three teams

Step 2 Send team number 1 out of the room

Step 3 Ask team number 2 to remain in the room and act as observers during the entire experiment

Step 4 Conduct a 5 minute "brainstorming" session with team number 3 using the following rules:

a. Select a suitable problem or question on a specific topic

b. Critical judgments are ruled out. Criticism can be applied later

c. Free-wheeling is welcomed. A quantity of ideas is wanted. The more ideas the better chance for good ones. The wilder the better; it's easier to tame them down than to pump them up.

d. A recorder lists the ideas on newsprint or other type of paper so that they can be referred to at the end of the exercise.

Leader rings bell when one of these rules if violated.

Step 5 Count the number of ideas generated by team and then put the papers aside.

Step 6 Explain to team number 3 that team number 1 will be asked to hold a similar kind of session. However, while they are doing so, team number 3 is to discuss, criticize, or evaluate each idea as it is presented. This should be done fairly, but firmly.

Step 7 Recall team number 1 to room and proceed as in Step 6. Record and count ideas given by team number 1. Compare the results produced by team number 3 vs. team number 1.

Step 8 Have team number 2 discuss the observations they made. Analyze what they think it means.

Step 9 Have team number 1 discuss how they felt under the pressure of criticism and why they reacted as they did. Encourage free expression of their feelings.[1]

Summarize the conclusions concerning this experiment and its results.

1. A judicial mind analyzes, compares and chooses.

2. The creative mind visualizes, foresees, and generates ideas.

3. Creative thinking and Judicial thinking are both important steps in "The Creative Problem Solving Process."

4. The right mood for judicial thinking is largely negative.

   Example:
   "What's wrong with this?"
   "What's the cut about that?"
   "No, that won't work."
   "What holes can I rake in that?"

   Often this type of destructive imagination is so well developed that it can speedily think of objection after objection after objection after objection.

5. Judgment and imagination can help each other if kept apart, when they should be kept apart.

   In creative effort we have to be a Jekyll-and-Hyde. From time to time, we must turn off our critical thinking skills and turn to our creative mind. Wait long enough before criticizing, analyzing and evaluating your

[1] Adapted from
Taylor, Jack, **How To Create New Ideas**, pp. 32-34

ideas. Otherwise premature judgment may destroy your confidence and reduce the number of ideas being generated.

Say to the judicial-minded or negative thinkers—"I don't want your opinions and ideas yet; I am still thinking up possibilities. Just now, I want more and better ideas. What have you to suggest;?" This is an excellent way to handle the negative thinkers.

6. Creative thinking calls for a positive attitude. We have to be hopeful. We need enthusiasm. We have to encourage ourselves to the point of self-confidence.

LEARNING PACKET 4:

THINKING IN NEW DIMENSIONS

Performance Objectives:

1. Identify and make a list of the methods and places such as solitary walks or "thinking rooms" which create conditions for increasing your abilities to produce ideas.

2. Carry out the following techniques:

   a. "Magic Squares"
   b. "Find Your Creativity Peaks"
   c. "Part Changing Method"
   d. "Think Big Approach"

3. Carry out at least 3 other of the techniques found in section 4 of the student's section.

4. Analyze the creative techniques presented and determine which of them have proven to be the most successful for you in "thinking-up" ideas. Give specific examples of how you can increase your creative abilities and skills.

Generalizations:

1. A high level of difficulty cannot be maintained continuously, but occasionally every individual should confront problems which stretch his imagination and ingenuity to the limits.

2. Focus on the positive and not on the negative.

3. Each person has a time which is the most efficient time for thinking and creating.

4. Development of skills in asking questions leads to questions and gives brith to more questions.

5. A big goal can increase your effort, channel your capabilities and create enthusiasm for a project.

6. It is necessary to find a place that is conducive for doing creative thinking or carrying out projects.

7. A person is more receptive to his hunches when he is relaxed.

Suggested Learning Activities:

(For either class or individual activities)

1. Listen to cassette tape or read narration "Thinking In New Dimensions".

(Class activities)

2. Discuss the meaning of this statement, "it is important to record failures as well as successes, so that our efforts need not be duplicated unwittingly at a later date. If we record our failures and their causes, technology advances."

3. Using the exercise (pp. 31) predict "What Would Happen If?"

4. To help students develop forecasting abilities use the exercises, "Time In Reverse", "Forecasting" or "Year 2000", pp. 33 .

5. Display a variety of picture frames and have class participate in "Part Changing" exercise to learn another technique for creating ideas. For "Part Changing" method instructions see page 35.

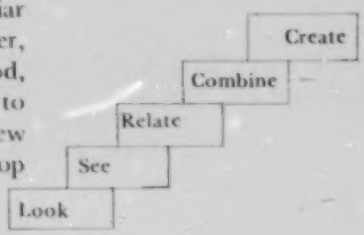
6. Conduct "Association Exercise" found on page 36 .

7. Discuss "Think Big Approach" and carry out exercise number 4 - C in student section.

8. Discuss and do the "Magic Squares" technique. Use the sheet "Magic Squares" Exercise 1 in student section page 28-S.

9. Develop a bulletin board: "The Attic of Your Imagination." (Use the Part Changing Method to carry out this activity)

Using 3 or 4 familiar items such as: ball, ruler, box and blocks of wood, carry through steps to the creation of a new child's game and develop into a bulletin board.



(Individual student activities)

10. Carry out "Part Changing" Method technique (student section number 4 - A).

11. Carry out "Association Exercise" (student section number 4 - B).

12. Carry out "Think Big Approach" (student section number 4 - C).

13. Analyze the best times for you to do your creative thinking and carrying out creative activities using "Your Creative Peaks" (Number 4 - D).

14. Do Exercise 2 of "Magic Squares" (Number 4 - E in student Section).

15. Complete the performance objectives

Instructional Materials:

For class activities

1. Tape or narration "Thinking in New Dimensions"

2. "What Would Happen If?"

3. "Forecasting"

4. "Time In Reverse"

5. "Part Changing Method"

6. "Association" Exercise

7. "Think Big" Approach (Number 4 - C student section)

8. Exercise 1, "Magic Squares" (Number 4 - E)

9. Materials for the bulletin boards:

   a. "The Attic of Your Imagination"—or pictures of actual items— ball, ruler, box, blocks or wood
   b. "Ideas Are Flighty Things"
   c. "Make Creativity An Around-the-Clock Routine"

For individual student activities

1. "Part Changing Method" (Number 4 - A)

2. "Association" Exercise (Number 4 - B)

3. "Think Big Approach" (Number 4 - C)

4. "Find Your Creativity Peaks" (Number 4 - D)

5. "Magic Squares" Exercise 2 (Number 4 - E)

6. "Spark Up The Ordinary" (Number 4 - F)

7. "Create A Casserole" (Number 4 - G)

8. "Picture Puzzle" (Number 4 - H)

9. "Create A Picture or Design" (Number 4 - I)

10. "4 C's Technique" (Number 4 - J)

11. "Rhyme Time" (Number 4 - K)

Equipment

1. Cassette tape recorder

2. Ball, ruler, box, blocks of wood

3. Lettering for bulletin boards

4. A variety of picture frames

Further References:

Teacher References:

Von Fange, Eugene, **Professional Creativity**, Ch. 12, "Develop Methods," pp. 175-182.

Taylor, Jack, **How To Create New Ideas**

Baker, Samm S., **Your Key To Creative Thinking**, Chs. 6, 7, 8

Student References:

Forum, Creative Decision Making, Fall/Winter, 1973, "Applying Creative Thinking," pp. 10-11; "Idea-Generating Strategies," pp. 12-13; "A Creativity Break," pp. 24-25.

Edwards, William E., **10 Days To A Great New Life**, pp. 176-193.

Osborn, Alex F., **Applied Imagination**, Ch. 4.

Parnes, Sidney J., "Do You Really Understand Brainstorming?" **The Source Book for Creative Thinking**, pp. 283-290.

Smith, James E., **Setting Conditions for Creative Thinking in the Elementary School**, Ch. 9, "Principles Basic to Creative Teaching," pp. 151-172.

NARRATION:

THINKING IN NEW DIMENSIONS

"I FIND THAT A GREAT PART OF THE INFORMATION I HAV WAS ACQUIRED BY LOOKING UP SOMETHING, AND FINDING SOMETHING ELSE ON THE WAY!"

Adams

You have arrived at an important destination in your creative adventure. From this time on it will be your responsibility to think up as many ideas as possible. At this stage in the creative process, exploration should be deliberate and systematic. These techniques are merely a means of evolving "good" ideas deliberately and repeatedly. They are not meant to give a finished result.

Their purpose is to start and guide your thinking along new paths that may lead to a successful destination. They can help you to learn how and where to locate rich sources of ideas. This path can sometimes be a long one. A majority of the time a good idea is achieved only after many inadequate ones have been considered. So don't become discouraged. Keep remembering among ten foolish ideas there may be a brilliant one.

If you don't achieve overnight success with these exercises you know that you must continue to practice and think. You are forming a new habit, and to replace an old and comfortable habit with a new one, even if it is a more satisfactory one, requires time, practice, conscious effort and PATIENCE.

A creative person is not an undisciplined thinker, but the exact opposite. The shortest road toward creativity is to learn how to think scientifically. Steps in the creative process and examples will be presented in more detail in Section 5: READY FOR ACTION.

As you begin to work on gathering ideas you may want to re-examine your problem to see if you are focusing on the wanted solution. Many times a person may lose out completely by not determining the right goal. This can cause a person to move in wrong directions. It is difficult to find correct or suitable answers unless the objectives are known or clear.

Before turning to these mind developing exercises and techniques, there are several helpful suggestions which you should consider:

1. Remember to keep your mind open—look and see. You never quite know where an idea will come from or when it will come, and once it arrives what to do with it.

2. A journey begins with the first mile. Concentrate on that first mile, not the hundred miles ahead. If you have been given the English assignment to write a 1000 word theme it would be much less discouraging to concentrate on the beginning and not worry about the last page. You should really feel good when you've finished the first page and can say to yourself, "Great, I've made a start." As you progress in writing your theme you should be more encouraged and maybe even get into the subject so deeply that you will feel a real excitement and motivation.

FOCUS ON THE POSITIVE AND NOT ON THE NEGATIVE—HOW FAR YOU HAVE PROGRESSED, NOT HOW FAR YOU STILL HAVE TO GO!

3. Be patient and move forward one step at a time. Don't seek perfection at each step. After you have the ideas down on paper you will be able to go back and "polish up" your activities and ideas.

4. The best way to master these techniques is through regular study and practice over a span of time. It requires time to absorb an idea and time to change a habit. The more you practice the better you should become in using the techniques to think up answers to challenges.

It would be a good idea for you to continue thinking up ideas over a period of at least six

weeks because an experiment using 100 people showed that without repetition

After 24 hours 25 had forgotten it

After 48 hours 50 had forgotten it

After 4 days 85 had forgotten it

After 16 days 98 had forgotten it

For this reason it is helpful to listen to the cassette tapes or read the script provided in this unit at least 5 times during the week. It would be wiser to work on one section per week until you have completed this entire unit.

5. Set up a regular time for working on your creativity exercises. Each person operates on a different time schedule. Select the periods when you naturally would be most likely to produce ideas. Are you a morning person—energetic early in the morning, but losing mental pep and energy rapidly toward evening? Or are you a "night owl"— you don't get rolling until hours after arising, and getting more accomplished in the evening.

   In the student section is Number 4 - D, "Find Your Creativity Peaks." This exercise can help you to find your most efficient time for completing projects.

   You may change these periods, but you'll find it helpful to set aside a special time for thinking. You may even find other brief periods to work on problems and ideas—times such as riding the school bus, walking to school, doing the dishes. Remember to keep that pad and pencil close by to jot down those ideas as they pop into your head.

6. Develop skills in asking questions. Charles Steinmetz stated it very effectively when he said, "No man really becomes a fool until he stops asking questions!"

QUESTIONS GIVE BIRTH TO MORE QUESTIONS

Dr. Earnest Dichter in a speech, "The Theory of Creativity" stated, "When we do research on bed sheets for instance, we start out by asking basic, fundamental and sometimes apparently stupid questions. Who invented bed sheets? Who used them first? What did the Romans, the Greeks, and the Vikings use for bed sheets?"[1]

By asking such naive questions we free ourselves first from the arrogance of easy answers. By discovering that we really don't know anything about bed sheets we become humble and feel the need to start from scratch; we have embarked on the road to creativeness."

7. You cannot sit down and wait for a creative thought to appear as if by magic. You will need to develop self-discipline and have a purpose big enough to get you excited and moving. A purpose so big that you will give it your all out effort. The "Think Big Approach" can help you find that purpose.

8. Combine your best time and your right place for the production of ideas. You most effective "creative thinking place" might be a favorite easy chair in the living room, the dining room table or a desk in your bedroom.

   It could be that secluded outdoor hideaway—depending upon the seasons, of course. Or you might enjoy sitting on a rock dangling your feet in a mountain stream with the sun streaming down upon you and giving you a warm contented feeling all over.

   Some individuals are even able to achieve privacy on a crowded bus or train. Make a start now by writing down what might be your best places for thinking.

9. Pay attention to your hunches! Relaxation is an important step. "Creative flashes" often come when you are relaxed and perhaps thinking about or participating in other activities. Take an hour out, rest and relax. Your mind needs relaxation as well as your body. When you are relaxed you are more receptive to those hunches.

[1]Dichter, Dr. Ernest, "The Theory of Creativity," (Speech) pp. 2-3.

10. Proceed optimistically, with full enthusiasm and confidence. Have the courage and desire to accept the challenge to carry out these mental exercises which will help you to achieve your goals.

To summarize, remember that you must (1) be motivated, (2) be enthusiastic about your ideas and living, (3) have "stickability"– don't quit or give up too soon, (4) maintain a questioning–curious attitude, (5) KEEP EXERCISING YOUR MIND. Your brain needs exercise just like your muscles. (6) "Loosen up" your thinking so that ideas won't be blocked.

"A MAN'S MIND STRETCHED BY A NEW IDEA CAN NEVER GO BACK TO ITS ORIGINAL DIMENSION!"

CAUSE AND EFFECT

The ability to evaluate cause and effect is a talent that people who are forever in trouble often lack.

Objective:

Given an action or condition, forecast the effect you anticipate. One must learn to anticipate all possibilities and logically evaluate these considerations in order to function at one's optimum level.

Activity:

List any number of situations, complex or simple. Have the students predict what will happen.

Examples:

1. You yelled at your mother. What will happen?_____
2. You are ten minutes late for school. What will happen?_____
3. Your best friend is mad at you. You write your friend a note saying you would like to talk to her. What will happen?_____
4. You didn't get your English these finished for your morning class. What will happen?_____
5. You accepted a date with your best friend's boyfriend. What will happen?_____
6. You skipped school on a beautiful spring afternoon. What will happen?_____

Adapted from:
Talent Ignition Guide, p.36.

WHAT WOULD HAPPEN IF? . . .

Objective:

To develop the ability to see cause and effects; and to be able to weigh possibilities and logically predict the probable outsome.

Activity:

What would happen if Thomas Jefferson had not been born?

1. What are the important things that happened while he was alive;
2. Which of these things did he personally affect?
3. Would any of these things have happened even if he had not lived?

4. Which things could not have happened had he not been here?
   Why?

5. If these things had not taken place what do you think might have happend instead?

Adapted from:

Talent Ignition Guide, Bella Vista Elementary School, (Jordan School District) and The Institute For Behavioral Research In Science, Sandy, Utah, 1970, p. 32.

TIME IN REVERSE

Today you are going to take a journey back in time. You are going to live in the time of King Henry VIII.

Using your knowledge of the present and conditions of the past, ask yourself these questions. Perhaps they might help you to relate back to that century.

1. What will you see that might be different from some of the things which you have read about?
2. What will your life be like? What will your living conditions be like?
3. How will you have to change yourself in order to adapt?
4. Plan how you will travel through time.
5. Who will meet you when you arrive?
6. How will you feel? How will they accept a stranger such as yourself?
7. What will you talk about?
8. What will interest you most during your stay?
9. What places will you visit?
10. Who will be your closest friends?
11. What will interest you most during your stay?
12. What will you change while you are there?
13. What type of sports events will you attend? What will the main forms of entertainment be?

Additional Activities:

1. Spend a day with the famous outlaw, "Billy The Kid."
2. Ride with Buffalo Bill on one of his scouting expeditions of the "wild west."
3. Travel with Lewis and Clark as they explored the Lousiana Purchase.
4. Suppose you are a soldier in the Roman Army of Julius Caesar.
5. Imagine you are a slave being transported to America on a slave ship.
6. Suppose you are living in the Middle Ages and you must prove you are NOT a witch or warlock.
7. Pretend you are _____ . What are your problems, feelings, opinions. Choices might be:

Paul Revere	Napoleon
King Arthur	Dolly Madison
Judas Iscariot	Helen of Troy
Cleopatra	Joan of Arc
Nero	General George Armstrong Custer

Marie Antoinette	Susan B. Anthony
Chief Crazy Horse	Eleanor Roosevelt
A Sioux Warrior	Abraham Lincoln

Adapted from:

Talent Ignition Guide, p. 35.

Class Activity

YEAR 2000

Objective:

To develop the ability to see cause and effect choose an activity, study it, make suggested changes and judge what effects will result from the changes.

Activity:

By the year 2000 what changes do you predict will have taken place which will take into consideration the increased population?

1. What affect will an increase in population have open the physical enviornment?
2. What affect will an increase in population have upon cultures and relationships between people?
3. How will the increased population increase stresses, frustrations and pressures on the individual in the society?
4. How would you change society to ease these stresses, pressures and frustrations?
5. How would you change laws, governments, religions, and educational institutions to enable increased numbers of people to function efficiently and effectively?

Additional Activities:

1. What would you do to help eliminate starvation in the world?
2. What will you do to help control noise pollution?
3. What will you do to improve the transportation systems as the population increases?

Adapted from:

Talent Ignition Guide, p. 33.

FORECASTING

A prediction or evaluation of future events requires forecasting talent and the ability to evaluate cause and effect. Forecasting is a constant process as individuals decide what and how they will act and what they expect the results to be. It predicts the rewards you expect as a result of your acts as well as possible punishment. It should also include understanding of others and acceptance of commitments to responsible behavior.

Forecasting talent involves the development of the necessary thinking abilities. To help develop these abilities ask yourself these questions:

1. What are my goals?
2. What do I know and what do I need to know before acting?
3. How will situations or conditions change?
4. What possible consequences can be anticipated?
5. How will other people feel or act?
6. Will change cause disorder or destruction?
7. Will changes impose unpleasant or unacceptable conditions upon others?

8. How does what I want to do effect the needs of others? Will my behavior be responsible?

9. Based upon what I know to be so and what has been done, what results or actions can be predicted?

Adapted from:

Talent Ignition Guide, p. 31.

Class Exercise

Joan flirts with all the boys and dresses in very "far out" styles. She ignores the girls.

Causes	What effects can Joan expect

Class Activity

PART CHANGING METHOD

Ideas developed through the use of Part Changing listings must be tested, verified, judged, evaluated—after the ideas have been produced.

Class Exercise

Step 1. Choose object to improve.
(Example: how can the common picture frame be improved?)

Step 2. List parts.
a. frame
b. front cover
c. back cover
d. hanging device

Step 3. Change or modify each part. Think about one part at a time. Change or modify it in your mind, making notes on the changes as you go along.

Example:

shape could be oval, 3-dimensional

front could be plastic, glass, mesh

frame could be metal, paper, colored, feathers, flowers, straws, pine-cones, fabric, yarn

opening could be at side, top, adjust-a-frame

The entire assembly could be held up by suction cups.

Follow on out in this way just as far as you can. Then check and see how many possible combinations you can come up with.

Class Activity

ASSOCIATIONS EXERCISE

1. Ask the class members to study these two lists of objects. (Place the corresponding numbers directly across from one another).

2. At the end of 3 minutes have each student take out a piece of paper and list as many pairings as they can remember. (The numbering is unimportant.)

List 1	List 2
1. bicycle	1. box
2. frame	2. picture
3. cow	3. type
4. branch	4. tree
5. platter	5. ball
6. hoe	6. garden
7. dish	7. cosmetics
8. stamp	8. letter
9. blue	9. tango
10. time	10. watch
11. lamp	11. sponge
12. nail	12. hammer
13. hair	13. eraser
14. flame	14. fire
15. jive	15. wall
16. animals	16. zoo
17. clip	17. calendar
18. bark	18. dog
19. baseball	19. pin
20. chair	20. table

NOTE: How many unassociated pairings were remembered?

How many associated pairings were remembered?

Usually the average number of associated pairings which class members remembered will be higher than the average number of unassociated pairings.

IT IS EASIER TO REMEMBER OBJECTS AND IDEAS WHICH HAVE SOMETHING IN COMMON

LEARNING PACKET 5:

READY FOR ACTION

Performance Objectives:

1. Using the Checkerboard Technique, find possible solutions to one of the suggested problems or another one of your choosing.

2. Carry out three of the "Sharpen Your Listening Skills" exercises found on page 42-S of the student section.

3. Keep a record for one month on listening in the following situations:

a. class
b. watching television
c. social gatherings
d. family discussions
e. informal conversation with friends
f. class meetings or other school organizational meetings

Analyze yourself as a listener after the situation has passed. Use the questionnaire in the student section on page 41-S or use one which has been developed by the class.

4. Using the suggested form "My Blueprint for Action," found in the student section, apply the "Steps in the Creative Thinking Process" to the creation of an idea, to a needed change, or fulfillment of a secret desire. Carry the steps through to action and re-evaluation.

Generalizations:

1. Steps in the creative process seem to be quite well established and the process appears to be essentially the same regardless of the activity.

2. Creative thinking is essential in the application of knowledge to daily, personal and career problems.

3. People make mistakes because they permit a set way of thinking to get between them and the facts. They draw conclusions before examining all the evidence.

4. Prejudice can prevent people from interpreting facts correctly.

5. Studying facts of a problem while under the influence of strong emotions may lead to unclear thinking.

6. Our conscious mind is the center of logical thinking. Our subconscious mind is the center of inventive-creative thinking.

7. Failure to follow through with ideas is a common failure in creative thinking.

8. Most thinking, most problem-solving depends on probability.

9. No matter what the problem, someone else has almost always experienced it or a problem like it before.

10. Without a plan of action it is difficult to achieve a desired goal.

Suggested Learning Activities:

(Either class or individual activities)

1. Listen to cassette tape or read narration "Ready for Action"

(Class activities)

2. Use the hook and loop board, flannel board or bulletin board to present the "Steps Used in the Creative Process" (see bulletin board

idea "Climb to Creativity"). Using a current problem or concern of the class, carry out the steps to solve the problem, or concern.

3. Discuss the meaning of the following statements by Mark Twain:

   a. "It usually takes me three weeks to prepare a good impromptu speech."

   b. "The differences between perseverance and obstinancy is that one comes from strong will and the other from a strong won't."

4. Listen and carry out the exercises on the cassette tape: "The Art of Listening."

5. View transparency "What Kind of a Listener Are You?" Discuss and analyze listening skills presented. Develop a checklist of good listening skills.

6. Using the case study, "The Poor Listener," discuss the importance of developing one's listening skills.

7. Use the newspaper to find emotionally colored words. Circle the ones which the class feels are used to evoke emotional appeal.

8. Using the newspaper, analyze articles for propaganda techniques, stereotyping, over generalized statements.

(Individual student activities)

9. Test your "Prejudice Quotient." (Number 5 - A)

10. Carry out the Performance Objectives

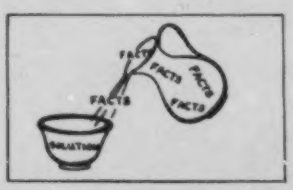
Instructional Materials:

For class activities

1. Cassette tape or narration, "Ready for Action"

2. Bulletin Board, "Magical Jug of Facts"

With this magical jug, no matter how often you pour from it, the contents never diminish; they remain; the jug is never emptied!



3. Bulletin Board Idea: "Climb to Creativity" page 48

4. Bulletin Board Idea: "Creation of an Idea"

5. Transparency: "What Kind of Listener Are You?" Page 49

6. Cassette Tape: "Are You Listening?" J. C. Penney Co.

7. Case Study: "The Poor Listener" page 50

8. "Checkerboard Technique" (student section number 5 - C)

9. "Criteria for Judging Possible Solutions" (student section number 5 - F)

Individual student materials

1. "Prejudice Quotient" "Number 5 - A)

2. "My Blueprint for Action" (Number 5 - B)

3. "Checkerboard Technique" (Number 5 - C)

4. "How Do I Listen" Check Sheet (Number 5 - D)

5. "Sharpen Your Listening Skills" (Number 5 - E)

6. "Criteria for Judging Solutions" (Number 5 - F)

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NARRATION:

READY FOR ACTION

THERE ARE BETTER WAYS OF DOING JUST ABOUT EVERYTHING

Congratulations! You have made it through the four preceding packets on CREATIVITY. Now you are ready to put all that knowledge and all those fresh new ideas into meaningful form. Those challenges and problems coming at you in life will no longer seem so overwhelming because you will know how to find solutions to them.

How do you make a decision? Is it by the trial and error method where you do it in a hit and miss fashion, then keep at it until either you or the problem wins out? Or perhaps you are a worrier. Do you worry and fret about a question and finally take another person's answer for the truth? Another way to make a decision is by flipping a coin or pulling slips of paper out of a hat. As a last resort when nothing else has proven satisfactory do you finally turn to your creative decision making abilities and do some good old-fashioned problem-solving?

Why is the problem-solving technique put off so long when this method will make life much easier? It will get you the best answers to your questions and problems. It cuts down on useless mental activity, when your mind seems to go around and around in circles and you get absolutely nowhere. It doesn't guarantee the perfect answer to your problem, but it does give you a better batting average than when you use those methods we just mentioned.

As we have said before, creative thinking isn't easy. It can be downright exhausting!!!

A good rule to follow whenever you are doing important thinking is to put all your ideas out on the table and then begin looking at and evaluating each idea one at a time; a successful way to do this is through the use of these steps in the decision making process.

1. Recognize your desire, need or problem and write it out in your own words.
2. List everything you know about the subject such as the facts, ideas, and resources you have available, as well as the obstacles you may encounter.
3. Read, experiment, observe, listen, ask questions, explore to get more information on the subject.
4. Organize all this information into a useable form, and look it over carefully to be sure that all the facts and ideas you have collected are there.
5. Suggest some possible ideas that might work to solve the problem or meet your need.
6. Think up many ideas using your favorite creative thinking techniques.
7. Relax and enjoy yourself while your conscious mind gets its "second wind"—let your subconscious mind do the difficult work.
8. Decide upon your best ideas and check them for flaws.
9. Work out a "plan of action."
10. Act! Once you are satisfied that your idea is worth trying, don't wait! Carry out your plan! Strike while the idea is hot, and keep it hot with "fiery enthusiasm!"
11. Check out your results. "Eureka! It worked! Well, almost or here we go again!"

Well, there they are, the steps you can follow to become a more creative you! Now let's look at each step in more detail to learn just how you can use them to achieve your most cherished desires or to get rid of that problem which has been "bugging" you.

1. RECOGNIZE YOUR DESIRE, NEED OR PROBLEM AND WRITE IT OUT IN YOUR OWN WORDS.

Identifying your needed change, desire or problem comes before any creative effort. Only after you have identified a problem can you take intelligent action.

You may be wondering why it is important that you put it down on paper—why you have to write it out. Stating what is wrong, what needs improving, what needs fixing, what you really hope to accomplish helps you to know where you are going. Then and only then can you decide how you are going to reach your destination—that desired end result.

State your goal in such a way that you will know exactly what you want to exist when you have what you are setting out to create. Be very specific!

To find the heart of the problem look for difficulties and annoying little nuisances. Describe what is currently bothering you, or decide on what you really want based on what you don't already have or what you want someday to be.

Get at the bottom of things by asking questions. Remember, why? Who? Which? Where? When? How? What if? Should? These are good for helping to "pinpoint the villian." Well, now that you know what the problem is—

2. LIST EVERYTHING YOU KNOW ABOUT THE SUBJECT.

Take stock of what you know, facts you already have, your ideas and thoughts about the subject and resources which are available. Be honest with yourself, what obstacles are holding you back? Identifying and writing out your goal is crucial to solving it, but more has to be done. You must gather as much information about the situation as you possibly can. These suggestions can help you to assemble all your known facts, ideas and resources.

a. Make a list of ideas that relate to your goal. Are they accurate, opinion, based on observation or hearsay? Such questions as these will help you to establish the truth of the ideas you have on your list. You should also check to see how relevant the facts are. Do they relate to your goal? You might check by asking "so what?" If your answer is, "so nothing" the fact in question is probably not important, so cross it off your list!

b. Make a list of resources that relate to your goal. What do you have that will help you to achieve your goal? Look around you in school, at home, in your community. List every possible resource that could help you in achieving your desire. One important point to remember is that skills, talents and abilities are also considered resources—refer back to your "Talent Show-through" exercise for your own personal resources.

c. Make a list of obstacles that relate to your goal. What is holding you back? Is it your personality? Is it a trait you need to work on? Is it money? Time? Health? Age? Where you live? Lack of supplies in school? List everything you can think of that might be blocking your goal.

d. Make a list of miscellaneous thoughts and ideas that come to your mind that might shed light on the subject. Sometimes these ideas are hunches that prove to be the "missing link" to the solution.

e. Recognize gaps in the information already at hand. What additional facts do you need before you can consider solutions?

3. READ, EXPERIMENT, INVESTIGATE, OBSERVE, LISTEN, INTERVIEW, ASK QUESTIONS, DISCUSS AND EXPLORE

This step is necessary because trying to solve problems with too little information is not likely to lead to success.

Read. Don't limit your ability to think clearly by tackling your problem based largely on your own experiences and those of family and friends. Read widely and check one author against another. Check dates on sources of information to be sure the information is up-to-date and the latest on the subject.

Investigate deeply and broadly using techniques such as "Dig Deeply" and "Checkerboard" and others you've been carrying out. After getting these ideas out of your "mind's storehouse" put them in writing.

Make it a habit to listen. Effective listening can mean more efficient learning and lead to better human relationships. You can sharpen your listening skills by completing several of the suggested activities presented in the student section. These exercises can help you learn to listen with greater understanding and with critical evaluation as well.

There are four basic ways to improve your listening.

a. Disregard distractions such as noise and don't let them interfere with listening.

b. Listen and determine the main idea of what the speaker is saying.

c. Don't let your prejudices interfere with what is being said. You may not agree with a speaker, but try to absorb his message.

d. Evaluate the speaker's message. Ask yourself if his information is recent, if he's competent to speak on the subject and—most important—if he is prejudiced in anyway about the subject.

4. PUT YOUR INFORMATION AND RESOURCES INTO UNDERSTANDABLE FORM AND ANALYZE IT

Sort it all out. Organize it. Write it. File it. Tape it. Outline it. Analyze it. Put it into scrapbooks. Do whatever you must so that you will be able to find the information when you need it.

As you collect more knowledge and understanding on your problem it would be wise to make revisions indicated by newly found facts. Identify errors in your thinking based on the facts you have assembled. Some of the "facts" you uncover will prove less than true. These errors can take many forms such as:

propaganda
stereotypes and cliches
quotations from questionable sources
generalizations from too few cases
emotional bias and prejudice
false analogies
pre-conceived notions
irrational appeals
rationalizations
wishful thinking
contagious thinking
black-and-white thinking
self-interest thinking
misconceptions

GET RID OF PRE-CONCEIVED IDEAS. Many people make costly mistakes because they let a set way of thinking get between them and the facts. They draw their conclusions before examining all the evidence, not after. The "Judgment Test" you took in Section 3 may have indicated this.

In applying this to daily living consider the "big money" people who were certain that the stage play, OKLAHOMA, would not succeed as a Broadway musical. They reasoned, since one of the main characters died and it included a ballet sequence, it wouldn't be accepted by the general public. They were wrong as we all now know. Fortunes were made by amateur investors willing to take a chance. A word of caution, however, some fortunes have also been lost. To give it a thorough investigation and to rid yourself of pre-conceived ideas ask:

What am I assuming to be true here?

Is it true?

How do I know?

Are any of my assumptions based on wishful thinking?

What, if anything, am I taking for granted?

Is it possible that I am wrong?[1]

GET RID OF PREJUDICES. Nothing you can name prevents more people from interpreting facts correctly than simple prejudice. Do you tend to approve or disapprove of certain people, circumstances, ideas and things for reasons that are not valid? Using the word association game in the student section, determine your "Prejudice Quotient."

You can prevent your biases from interfering with your judgment and interpretation of facts by first recognizing your prejudices and then rejecting them.

WATCH THOSE EMOTIONS. Don't study the facts of a problem while under the influence of a strong emotion, such as fear, jealousy, extreme happiness or depression. Even if you are working against a deadline, it is far wiser to put the facts aside and allow yourself a "cooling-off" period before tackling them. While we are considering the subject of emotions, there is another word of caution. Watch for those emotionally-colored words which others will use to persuade you to their point of view. Advertisements, editorials, "high powered" salespersons, and some speakers use emotional appeal tactics to "draw you to their corner."

[1] **How To Sharpen Your Thinking**, p. 19.

WATCH OUT FOR THESE OTHER POPULAR APPEALS. Pay attention to them, guard against these misleading appeals:

a. The appeal to your ego. "A person as smart as you can readily see why Jim Cooper should be elected President of Student Council."

b. The appeal to your wallet. "If you use your credit card to buy this coat while it is on sale you will save money—even with the interest you will pay on your credit."

c. The appeal to your sense of pity. "Poor Jane! The cliques are organized against her election and are spreading rumors about her."

d. The appeal to your prestige. "All the school's leaders such as Bob Thomas, Laura Johnson and Betty Green are going to vote for Jim Cooper for Student Council President."

e. The appeal to the desire to belong. "If you vote for Jim Cooper, you will be with the vast majority, and be more popular."

f. The appeal to imagination. "Jim Cooper knows a lot of bad things about this opponent, but he's too nice a guy to discuss them.

To summarize how to make the best use of the knowledge which you have accumulated, evaluate the data collected by distinguishing between:

true and false statements

opinion and fact

relevant and non-relevant information

verified and unverified data

radically new and impossible ideas

5. SUGGEST SOME POSSIBLE IDEAS THAT MIGHT WORK TO SOLVE THE PROBLEM OR MEET YOUR NEED

If new ideas still are slow in coming to mind then use such exercises as the "4 C's Technique" or the "Part Changing Method" to start the brain waves flowing again. The "Checkerboard" could also be used to develop possible solutions to a problem. Consider the results or consequences of each solution using the "Criteria for Judging Possible Solutions."

6. THINK UP MANY IDEAS USING YOUR FAVORITE CREATIVE TECHNIQUES.

Concentrate anew on your problem until ideas begin to emerge. As they occur, don't stop to judge them—produce them and write them out. Build up as many possibilities as you can. Remember we are going for quantity first, then quality.

7. RELAX AND ENJOY YOURSELF WHILE YOUR CONSCIOUS MIND GETS ITS "SECOND WIND"—LET YOUR SUBCONSCIOUS MIND DO THE DIFFICULT WORK

Take an hour to rest, relax, sit or lie quietly neither reading nor thinking actively or looking at anything in particular. You won't be wasting your time, you will be using it to your best advantage.

Don't be a rigid slave driver. Get away from the tedious and begin to enjoy leisure time; get a kick out of life. Sometimes during these periods of relaxation you will get a sudden glimpse of the solution for which you are striving. Jot it down quickly as an idea is fleeting and the conscious mind cannot be relied upon to recall it when you want it later.

OUR SILENT PARTNER, THE SUBCONSCIOUS MIND

Few of us have become acquainted with our subconscious mind or have learned the technique for using it. The only way you can know whether or not your subconscious has unlimited powers available for use is for you to test the idea by actual personal experience. An experiment carried on for a sufficient period of time can help to convince you of these remarkable powers.

The process of preparing the conscious and subconscious areas of the mind for effective subconscious thinking has been compared to the

process of "fireless cooking." If you study the ovens of some modern ranges you will notice that the walls of the ovens are insulated. This insulation allows the oven to store heat when the gas or electricity is on. After the oven has been turned off it continues to release heat over a long period of time.

This analogy can be likened to the prcess our conscious and subconscious minds follow in the development of a creative idea or project. The conscious mind can be compared to the oven burner which beings the cooking process. The subconscious mind is the insulated oven where the cooking is finished on the heat which has been stored. When you use your subconscious mind to do the "cooking" you use your past experience, your mental energy and stored knowledge, and your time with the greatest possible efficiency.[1]

When you give the subconscious mind a definite problem, question or commission, you start the "cooking." At this point the conscious mind should focus on it. It will need to accumulate the necessary facts, ideas, information and relevant data for the subconscious mind to work on. One important word of advise to be remembered is to focus the conscious mind on the material long enough and intensely enough to get it thoroughly "heated" before turning the assignment over to the subconscious mind.

You have done your homework and can now relax by turning to a favorite hobby or leisure time activity. What a great way to create!

A wonderful idea to remember about the subconscious mind is that it works best when you are doing what you like best to do—when you are following some hobby. Do you enjoy listening to a symphony concert, paiting pictures, writing poetry, or fixing up old automobiles, climbing a mountain, or digging in a garden? Perhaps active participation in such sports as tennis, boating or skiing is your way of "getting away from it all." In short your subconscious mind works best for you when you are taking a temporary vacation.[2]

Many of the great discoveries were made by men when they were following a hobby, rather than their vocation. The creator of the photographic process was an army officer; and of the electric motor, a bookbinder's clerk. The inventor of the telegraph was a portrait painter. A farmer invented the typewriter; a poet, the sewing machine. A groceryman developed the typesetting machine. The story of many great inventions has been the result of someone actively participating in a hobby.[3]

[1]William, John K., **The Knack of Using Your Subconscious Mind**, pp. 63-64.

You may not have the good luck to develop an invention in your leisure time which will make you a fortune. However, having an interesting and exciting hobby may contribute greatly to your good fortune if you learn to use it as a period for resting your conscious mind. Why not let your subconscious do the sorting out and reorganizing of ideas? Let it develop the plans for your projects or solutions to your problem. That is one of the purposes for the subconscious mind.[4]

"THE EXTREMELY BUSY, OVERWORKED PERSON WILL BENEFIT LITTLE FROM THE SERVICES OF HIS SUBCONSCIOUS MIND UNLESS OR UNTIL HE SLOWS DOWN AND GIVES IT A CHANCE."[5]

Learning to use the subconscious mind—consciously—is like forming any new habit. In forming a new habit, you have to repeat it until it becomes automatic. You will have to discard your old habit of straining to solve problems with your conscious mind and then accustom yourself to letting your subconscious mind take over. As you learn to relax you will find that "creative flashes" come more often. So I hope you will pay attention to your hunches becauses they are your subconscious "reporting in." This answer may come just as you are awakening, falling asleep or it may arrive unannounced at anytime of the day.

The important idea to remember here is that "the subconscious can nearly always to be depended upon for results if the assignment is definite, and if it is given power by calm, purposeful desire."[6]

Sometimes the solutions to some problems and projects are illogical and "far out." Could this explain why the conscious mind cannot arrive at the solution? These ideas may violate all known rules, reverse every reasonable concept—yet be the solutions!"[7]

A genius is not limited by logic, rules or previous experience. Perhaps all of us could develop some of these same qualities if we would refuse to be limited by our sensible and logical conscious mind and turned to our creative subconscious mind whenever we face a challenging problem. Only we limit the creative potential of this amazing, yet little used, area of our mind!

8. DECIDE UPON YOUR BEST IDEAS AND CHECK THEM FOR FLAWS

[2]**Ibid**, p. 94.
[3]**Ibid**, p. 95.
[4]**Ibid**, pp. 95-96.
[5]**Ibid**, p. 79.
[6]**Ibid**, p. 102.
[7]**Ibid**, p. 104.

After arriving at a decision, rework your ideas. Check your new ideas and examine each one objectively. Question it, challenge it, test it, rework it, improve it, follow it through. Study these ideas as though you were looking through a microscope. Failure to follow through is a common failure in creative thinking. Judge each idea using this criteria: Best, Good, Maybe, Doubtful, Nope.

In analyzing your best solutions you will tend to develop some generalizations concerning the facts and ideas you have collected. Depending on what you are trying to generalize about you will require one, a few, or many observations. The number of specific observations from which you can build a general statement may vary from one to millions.

Watch for these two traps when forming generalizations:[1]

a. The hasty generalization. Arriving at a generalization before observing a sufficient number of specific instances is one of the most common errors in reasoning. Example: Your mother is lying down when you come after school. She is lying down the next day, too. You may think to yourself, "my mother is sick". In reality she has been doing her spring housecleaning and is very tired. You made a hasty generalization about her health on much too little evidence. You can avoid trouble by asking yourself, "Have I considered enough incidences to warrant this conclusion?"

b. The second trap to avoid is the instance that is not typical. Suppose you are trying to decide about what happens to things that are thrown up into the air, and you are an astronaut orbiting around the earth. While in your capsule you observe that things thrown up into the air stay where they are!!! You have been taught about gravity, but in this case gravity was not at work. This time the reliability of your generalization has suffered. Unless the instances and situation you examine are typical of the entire class under consideration, your generalization is thrown off course. You should ask yourself this question, "Have I observed enough instances under typical conditions?" If your answer is "no", you are building your generalization on sand.[2]

Depending on how thoroughly you have investigated, the probability of the truth of your conclusion will vary. Most thinking, mos problem-solving depends on probability and logic. Even though there is no guarantee that you will always be right, your chances of being so when logic has been used are much higher than those of a person who rushes into a conclusion based on a "hunch" or "feeling".[3]

Test your solution. A scientist when he thinks he has made a discovery repeats his tests, double-checks his notes and his results. He examines the possibility of chance or other unidentified factors which might be working. With all these facts at his command he tries his very best to disprove his discovery. Only when it has passed this intensive investigation does he accept his results as the desired solution.[4]

"BE YOUR OWN DEVIL'S ADVOCATE"

Do you try the same technique with your tenative solution? Do you examine it for flaws? Do you dissect it as carefully as you can and dig for reasons why it won't work? You might want to consider whether or not it creates more problems than it solves. Can it be that it would be difficult to put it into operation? In what ways might it be inadequate? How much time, money, or personnel will it require? Questions like these will help to reveal flaws in your thinking and in your experimenting, and what modifications need to be made?

9. WORK OUT A PLAN OF ACTION

Without a "blueprint" the architect would have difficulty completing the building he has designed.

Without a map a family may never reach its destination while on vacation.

Without a plan of action you will find it very difficult to achieve your desired goal.

Your plan should include the following:

a. Statement of your desire, need or problem

b. Your goal written out in "glowing" terms

c. List of facts, ideas, resources and obstacles to overcome

d. Specific actions to be carried out leadin toward achievement of the goal

[1] **How To Sharpen Your Thinking**, p. 40. [2] **Ibid**, p. 41. [3] **Ibid**, pp. 42-43. [4] **Ibid**, p. 44.

e. "Red Letter" days—We tend to have "tomorrowitis" unless we set deadlines.

Once we have acquired the ability to establish "Red Letter'. days, we should cultivate the habit of working toward the many deadlines offered by a schedule.

It has been observed so often that it can almost be stated as a principle, that individuals start a new activity with a high level of interest, then this interest slowly decreases in intensity to a low point around the middle of the project, and continues at this level until the major deadline or due date becomes uncomfortably close.

10. ACT

Carry out your plan—once you are satisfied that your idea is worth trying. You might wish to try your solution on a small scale at first.

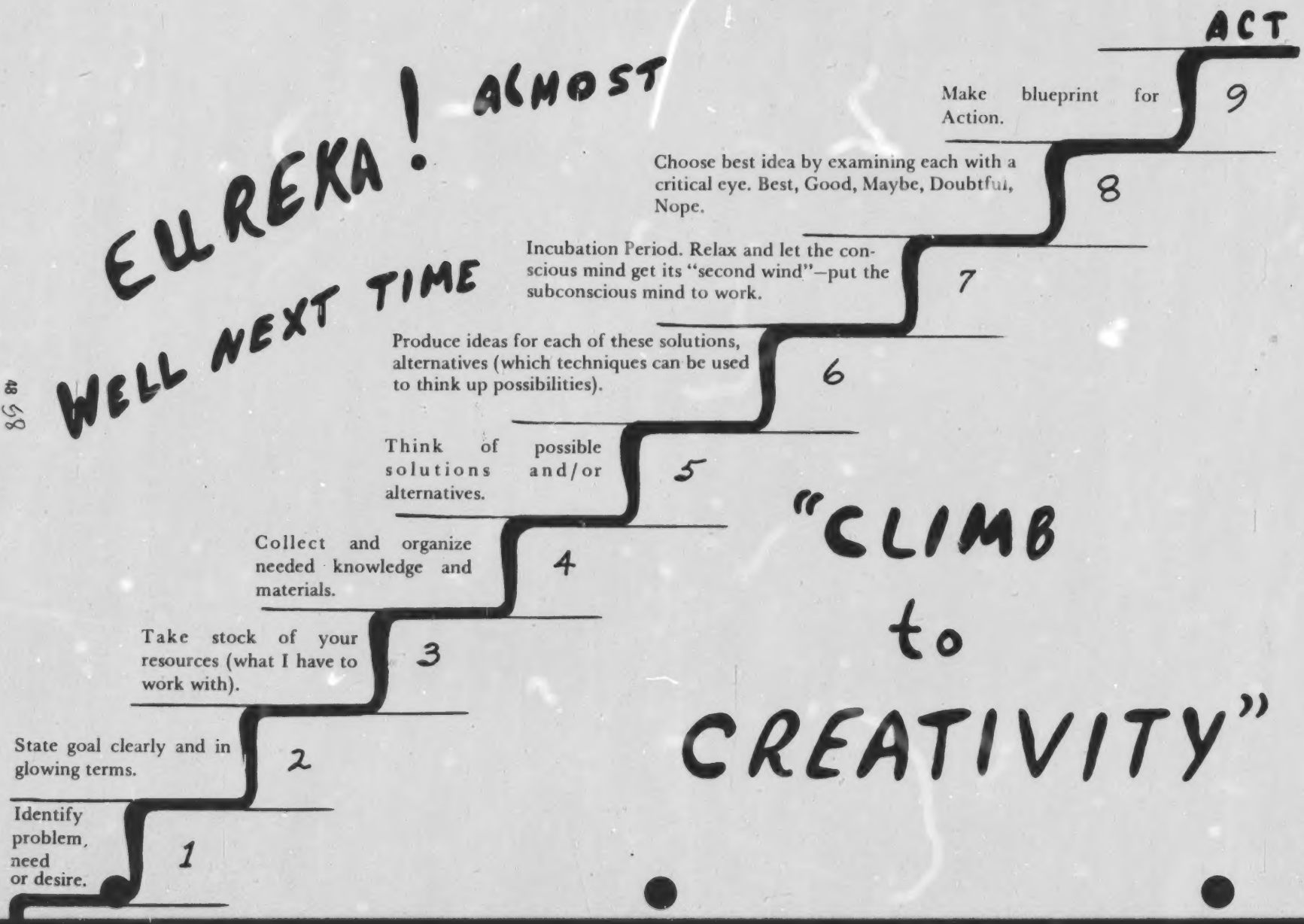
11. CHECK OUT YOUR RESULTS

If your solution passes all three tests, take a bow. You may implement it with confidence. But if your tests reveal any "bugs" that require extermination, don't despair. You've merely uncovered a sub-problem. Start from the beginning and work your way through the formula again. Keep repeating the formula as needed!

ERROR ITSELF MAY BE A HAPPY CHANCE!

In summary: to train for decision making (a) discuss the situation; (b) examine all possibilities or arguments for and against? (c) give weight to arguments presented or expressed; (d) come to a conclusion and; (e) be able to defend or support your decision as the best decision according to your logic and evaluation.

THE BRIGHTEST IDEAS ARE YET TO COME!


EUREKA! ALMOST
WELL NEXT TIME
ACT
Make blueprint for Action.
9
Choose best idea by examining each with a critical eye. Best, Good, Maybe, Doubtful, Nope.
8
Incubation Period. Relax and let the conscious mind get its "second wind"—put the subconscious mind to work.
7
Produce ideas for each of these solutions, alternatives (which techniques can be used to think up possibilities).
6
Think of possible solutions and/or alternatives.
5
Collect and organize needed knowledge and materials.
4
Take stock of your resources (what I have to work with).
3
State goal clearly and in glowing terms.
2
Identify problem, need or desire.
1
"CLIMB to CREATIVITY"

What kind of a listener are

YOU?

Pretending
Attention

Pencil
Listening

Premature
Dismissal

Fact
Listening

Hop-Skip
Jump
Listening

Yielding to
Distractions

Emotional
Deafness

THE POOR LISTENER

Mary Ellen was a graduate of a large city art school. She was twenty-one years old, pretty, talented, and ambitious. The instructors at the school were confident she had a good future and gave her fine recommendations upon graduation.

Mary Ellen's first opportunity came when she was made an apprentice in the art department of a large advertising agency. As the weeks went by it became apparent that she had a great deal of talent; it also became obvious to her fellow employees that she liked to talk.

On the job she did preliminary sketches and renderings of certain assorted products and items. Her department head gave her instructions orally. Often he would take only a few seconds to explain what he wanted and then leave Mary Ellen to work away for an hour or more. The sketches showed real promise but her supervisor soon became impatient with her inability to produce work related to the ideas he gave to her orally. He found it necessary to call her into his office and talk to her about the importance of being a good listener and taking verbal instruction.

If you had been Mary Ellen's boss, what would you have done? What suggestions would you have made and why?

Adapted from:

Chapman, Elwood N., **Your Attitude Is Showing**, p. 95.

OTHER SELECTED LEARNING ACTIVITIES

for

DEVELOPING CREATIVE THINKING ABILITIES

Assignment of writing the same message or story for different audiences and to achieve different effects . . . .

Exercises in writing unusual titles or captions for cartoons, pictures, and news items . . . .

Reports in an original manner . . . .

Assignment of individual reports to be done in an original manner. Record these reports or discussion and other oral work on tape recorder and playing it back . . . .

Assignments to write original skits, humorous stories, or anecdotes . . . .

Illustration of stories, poems, or other writings with drawings . . . .

Pupils create stories through use of pictures, cartoons, photographs, drawings . . . .

Activities to improve ability to make guesses from limited clues . . . .

Give reading assignments that will stimulate curiosity and question asking . . . .

Set-up a "Creativity Corner," a quiet spot where pupils can go to think and work out ideas . . . .

Plan classtime to provide times for pupils to think . . . .

Adapted from the following source:

Torrance, E. Paul, **Rewarding Creative Behavior**, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1965, pp. 87-90.

SOLUTIONS TO EXERCISES IN STUDENT SECTION

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ANSWERS TO JUDGMENT TEST (NUMBER 3 -A)

An essential element of good judgment is the habit of noticing the difference between your observations and your inferences.

1. T The story says so.

2. ? The story didn't say what she did the entire weekend.

3. ? The story said a supermarket.

4. ? The story says only the house caught fire. It did not say whose house—the Johnson's or the Larson's.

5. ? Same as 4.

6. ? The story didn't say whether or not the Johnson's lived in the suburb.

7. ? The story said she. Did this refer to Mrs. Larson or Mrs. Johnson?

8. T The story said so.

9. T The story said so.

MIND STRETCHERS SOLUTIONS (NUMBER 3 - D)

1. If "all but nine" of the farmer's sheep died, nine is the number he had left.

2. The coins were dated "46 B.C.", hmmm? And "B.C." means "Before Christ" . . . .

3. The two fellows playing checkers were plainly not playing checkers with each other, but with two other checker players.

4. Denver.

5. Mother and Son.

6. 72 inches.

7. Ann is 18.

8. This is about as simple as a problem can be, yet has been proved one of the most difficult to solve for most people. The reason is that the person challenged is usually not looking for the most commonplace answer. Instead, the tendency is to think about some obscure or unusual scientific item.

   Of course you need simply look, with eyes wide open and discerning, at most any brick wall. You'll note that the device used to look through the wall is surprisingly evident—a window.

9. Alphabet. It covers all the letters from A to Z, a total of twenty-six.

10. Only one egg, because, after that, his stomach isn't empty anymore.

11. Fast. (Did you err?)

12. The ladies don't get wet because it isn't raining.

13. A very clear echo.

14. Because there's not a single person in the room.

15. Wrong!

SOLUTIONS FOR THE MYSTERY MATERIAL

The time has come to reveal the name of this mysterious material. It is the common, everyday product we call paper. Yes, I said paper.

Now, before you decide that you have been the victim of a cruel hoax, let me explain:

First, all the information presented in the exercise is true except for the made-up name, "Material X." Let's look at the examples given:

(1) The Pullman Company once used car wheels made of laminated and compressed paper, and one was even known to have lasted 300,000 miles.

(2) A 50-foot factory chimney was built of paper at Breslau in Prussia.

(3) A church was made of paper mache which had been soaked in vitriol water and mixed with lime. It had also been treated with curdled milk and the whites of eggs. This church served worshipers in a Swedish parish for 30 years.

(4) A Dresdan watchmaker made a paper watch that kept perfect time.

(5) Paving bricks have been made of paper.

Two other uses for paper which were not previously mentioned were horse shoes and for a bridge over a deep canyon in the West.

Second, it is true that paper will not be patented because it is not patentable in its basic form.

Third, researchers in the paper industry believe that it is probable that there are many thousands more practical uses for paper, in its various forms. If this is the belief of experts in the field then why not put your imagination to work?

Look at the list you have begun. Would you have included some of the items if you had known it was paper? This exercise serves to show you how "Label-mindedness" can block your creative thinking abilities.

Do you see what happened during this experience? When you were presented the characteristics of the so-called "Material X," thinking creatively about it came naturally. But if you had started knowing that the material was paper, it's 100-to-one that you would have been uninterested or unstimulated and wouldn't have even begun thinking creatively how to use the material.

I can just hear you now, "paper is old stuff" or "paper is too familiar; it has been thoroughly explored. The experts have already figured out everything." Well, that would have been that. "Right?"

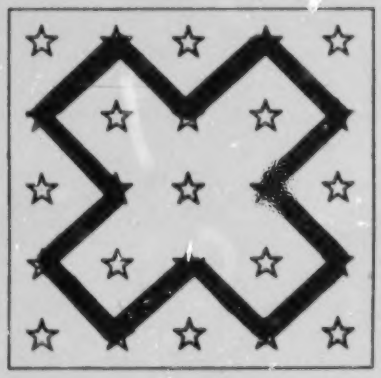
Now do you see why I chose to call it "Material X" until you had made your list of uses?[1]

[1]Adapted from:
Taylor, Jack, **How To Create New Ideas**, pp.37-38.

BRAIN TEASERS SOLUTIONS

1.

IF YOU THINK ABOUT IT ALL, YOU'LL SOON SEE THAT THE CENTER STAR IN THE BOX MUST ALSO BE THE CENTER UNTOUCHED STAR OF THE CROSS. NOW YOU HAVE TO FIGURE OUT WHICH WAY TO AIM THE ARMS OF THE CROSS. SINCE A PICTURE IS WORTH A THOUSAND WORDS, HERE'S THE SOLUTION.



THE SECRET: LOOKING AT A PROBLEM FROM ALL ANGLES.

2.

AGAIN, IF YOU HAVE PATIENCE . . . A GOOD PENCIL AND A BETTER ERASER . . . YOU'LL HAVE IT SOLVED IN NO TIME FLAT. IF PEOPLE ASK YOU HOW TO DO IT, TELL THEM TO TRY ISOLATING THE MIDDLE FIGURE WITH THE THREE LINES FIRST. IF THEY STILL CAN'T DO IT, HERE'S THE SOLUTION TO SHOW THEM

THE SECRET: SOLVE THE DIFFICULT PROBLEM BY SOLVING THE EASY ONES FIRST.

3.

START BY COUNTING THE SMALLEST SIZED TRIANGLES.

THEN COUNT THE NEXT SIZE.

THEN COUNT THE LARGEST TRIANGLES.

THE ANSWER: 20 TRIANGLES FOR A NORMALLY PERCEPTIVE PERSON. AN EXTREMELY PERCEPTIVE INDIVIDUAL MAY SEE MORE. IF ALL THE DESIGN ELEMENTS ARE UTILIZED A TOTAL OF 368 TRIANGLES CAN BE VISUALIZED.

SOLUTIONS CONT'D

4½	8	2½
3	5	7
7½	2	5½

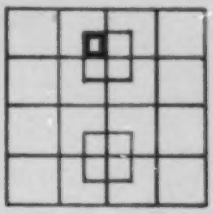
4.

PROBABLY THE TOUGHEST ONE TO DO BECAUSE IT INVOLVES SO MANY KINDS OF THINKING. FIRST, PURE ADDITION. SECOND, THE FORESIGHT TO USE FRACTIONS, NOT JUST WHOLE NUMBERS. THIRDLY, ORGANIZED TRIAL AND ERROR THINKING. THAT'S A LOT OF THINKING. IF YOU'VE MANAGED TO SOLVE IT . . . HAT'S OFF TO YOU. IF YOU HAVEN'T, OR IF PEOPLE ASK YOU FOR THE ANSWER . . . JUST SHOW THEM THIS.

THE SECRET: THINKING ON MORE THAN ONE LEVEL AT ONCE.

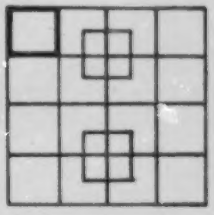
5.

FIRST COUNT THE SMALLEST SQUARES.



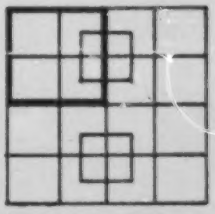
THERE ARE 8.

THEN THE NEXT SMALLEST SIZE.



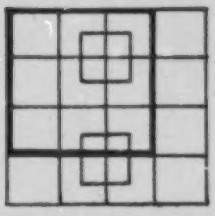
THERE ARE 18.

THEN THE NEXT SIZE.



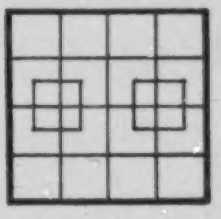
THERE ARE 9.

THEN THE NEXT SIZE.



THERE ARE 4.

FINALLY:
THE LARGEST SQUARE.



THE ANSWER: 40 SQUARES.
THE SOLUTION: RIGHT UNDER YOUR EYES IF YOU'RE A LOGICAL PERSON.

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YOU

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A CREATIVE PERSON

STUDENT SECTION

Using the suggested format based on the performance objectives and the exercises found in your student workbook begin keeping a notebook of your creative ideas. Continue keeping this for the entire unit. More detailed instructions may be provided by your teacher.

PERFORMANCE OBJECTIVES

Section 1: Unexplored Territory

1. After exploring ideas on creativity and using Number 1 - C, write a statement giving at least three specific ways in which your concept on creativity has changed.

2. Use at least two of the following techniques to help further develop your individual creativity.

   Number 1 - D "Doodle Design" Activity
   Number 1 - E "Blotto" Exercise
   Number 1 - F "Idea-Starter" Technique

Section 2: Is Your Creativity Showing?

1. Using the checklist "Characteristics Which Are A Clue to Creativity" (Number 2 - A), analyze yourself for your creativity traits.

2. Carry out the "Free-Wheeling" Exercise (Number 2 - B).

3. Begin recording your talent show-throughs using Number 2 - C.

4. Using Number 2 - D, describe in written form the most creative person you know.

Section 3: Blocks to Creativity

1. After completing at least four of Number 3 - A, Number 3 - B, Number 3 - C, Number 3 - D, Number 3 - E, Number 3 - F, Number 3 - G, the puzzles and quizzes, examine yourself in relation to the "Creative Thinking Blocks" Examine your performance and as carefully as possible, determine how and to what extend each block tends to influence your performance.

2. Develop as many ideas as you can for eliminating off-setting or overcoming each of these blocks and/or its effect. Begin to put these ideas into practice.

Section 4: Thinking In New Dimensions

1. Identify and make a list of the methods and places such as solitary walks or "thinking rooms" which create conditions for increasing your abilities to produce ideas.

2. Carry out the following techniques:

   a. Number 4 - A "Part Changing Method"
   b. Number 4 - C "Think Big Approach"
   c. Number 4 - D "Find Your Creativity Peaks"
   d. Number 4 - E "Magic Squares" - Exercise 2

3. Carry out at least three other of the techniques in Section 4:

   a. Number 4 - B "Association Exercise"
   b. Number 4 - F "Spark Up The Ordianry"
   c. Number 4 - G "Create A Casserole"
   d. Number 4 - H "Picture Puzzle"
   e. Number 4 - I "Create a Picture or Design"
   f. Number 4 - J "4 C's Technique"
   g. Number 4 - K "Rhyme Time"

4. Analyze the creative techniques presented and determine which of them have proven to be the most successful for you in "thinking-up" ideas. Give specific examples of how you can increase you creative abilities.

Section 5: Ready for Action

1. Using the "Checkerboard Technique" find possible solutions to one of the suggested

problems (Number 5 - C) or another one of your choosing.

2. Carry out three of the "Sharpen Your Listening Skills" exercises (Number 5 - E).

3. Keep a record for one month on listening in the following situations:

   a. class
   b. watching television
   c. social gatherings
   d. family discussions
   e. informal conversation with friends
   f. class meetings or other school organizational meetings

   Analyze yourself as a listener after the situation has passed. Use the questionnaire (Number 5 - C) or use one which has been developed by your class

4. Using the suggested form "My Blueprint For Action" found in the student section, apply the "Steps In The Creative Thinking Process" to the creation of an idea, to a needed change, or fulfillment of a secret desire. Carry the steps through to action and re-evaluation.

SECTION 1

UNEXPLORED TERRITORY

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"IMAGINATION RULES THE WORLD"

NAPOLEON

NUMBER 1 - A

WHAT IS YOUR C.Q.?

1. Begin putting down your thoughts on what the word creativity means to you using Exercise Number 1 - C.
2. Do Number 1 - B "Finish The Drawing" Exercise.
3. Using the following 10 Key Creative Mental Elements Checklist determine your "Creativity Quotient."

	What I do to show I have this characteristic	Better work on this
A. Desire: Provides the spark that moves you to use all the other characteristics and face each problem. It is wanting to make things better for yourself and others by improving upon the solution or goal and finding ways to make things better.		
B. Alertness: Being aware of everything that is going on around you. It is noting everything that is happening to you and around you.		
C. Interest: The desire to dig deeper into a problem or a subject. Excitement and enthusiasm for the subject which provides the incentive for you to study it in depth.		
D. Curiosity: Asking questions, examining all sides of the problem, situation or item encourages a spirt of inquiry.		
E. Thoughtfulness: This leads to a thorough understanding as you view all aspects of the problem or situation as you give it your complete attention and interest.		
F. Concentration: This element is closely related to thoughtfulness. It refers to the ability to focus your interest and thought and keep it focused as you look for and study the problem, situation or item in detail.		

	What I do to show I have this characteristic	Better work on this
G. Application Applying effort and energy to the task as you work steadily and industriously. In the words of Thomas Edison, "Genius is 2% inspiration and 98% perspiration."		
H. Patience. Tenacity of purpose. It is "stickability." You "keep on keeping on" instead of settling for the simplest or first solution that seems to emerge. It is perseverance, the ability to stay with a problem until you are satisfied that the best solution has been found.		
I. Optimism: Combine enthusiasm, self-confidence and a positive attitude as you try to find creative solutions to your problem, goal or situation.		
J. Cooperation: Accept views and suggestons provided by others and make modifications which will make ideas more workable, useable and practical. This is also the desire and willingness to share you creative ideas with others.		

HOW DID YOU SCORE?

Add up the check marks and see how you scored, without fooling yourself. If you scored "have" on eight or more of the elements, you rate high and you're well started toward full development as a creative person.

If you scored "have" on only seven or fewer of the categories, you'd better go to work on yourself to develop those qualities. You certainly can if you want to. It will pay you to keep rechecking that list and re-rating yourself every week or two.

There are a number of other elements that contribute to the makeup of a creative person, but these ten are fundamental and essential.

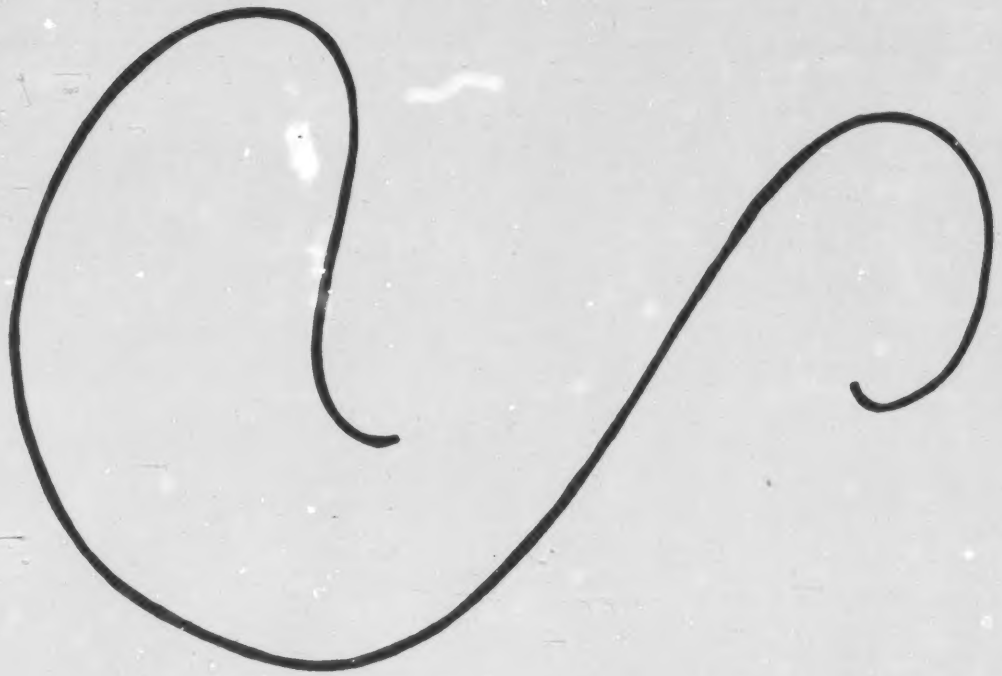
Adapted from:

Baker, Samm S., Your Key To Creative Thinking, pp. 27-29.

NUMBER 1 - B

"LET YOUR IMAGINATION GO"

Finish this drawing and give it a title. Complete this figure in such a way as to make an interesting picture. Add details to make it tell an interesting story.



NUMBER 1-C

MY THOUGHTS ON CREATIVITY

WHAT "CREATIVITY" means to me.

NUMBER 1 - D

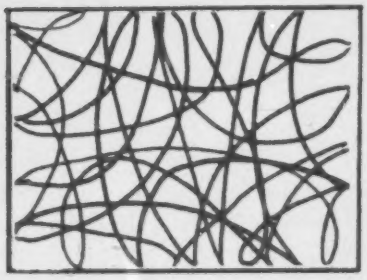
"DOODLE DESIGN"

Create a Design

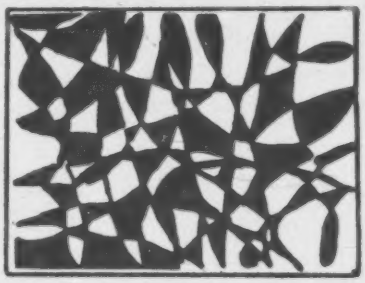
The purpose of this exercise is to develop originality through the use of lines which create many design possibilities.

1. Take a sheet of paper and pencil. Place the pencil on one edge of the paper and without lifting the pencil draw lines at random, being certain to touch one edge of the paper each time.
2. When the paper has been filled with lines, shade in every other space. Can you begin to recognize some familiar designs, shapes or figures?
3. Trace a design or designs which you can see.

Example



Step 1



Step 2

Step 3

Step 4

This exercise could produce interesting designs for a poster, a back cover, an advertisement, or a wall hanging.

NUMBER 1 - E

BLOTTO EXERCISE

"Imagination is the Key"

A good way to show that we can learn to see is by examining an ink blot. First drop one or more colors of liquid paint on a piece of 8 x 11½" paper. Fold the paper in half. Open it up and let it dry.

Examine your "creation." What do you see? Describe as many items as you can. Look away from it and then look back. Tack it up across the room. Can you discover new shapes?

Turn it upside down, then sideways. Do still more shapes appear?

Ask another person to describe what they see in your ink blot. Are you both seeing the same shapes? Which ones did you both see as the same? Which were different? Why?

NUMBER 1 - F

IDEA-STARTER TECHNIQUE

Find new ideas by imagining how some things might be done a hundred or a thousand years from now.

For new ideas on how to make something better, think of what's wrong with the old something.

To find many new uses for something, imagine yourself in different **situations** and **places.** What uses can you think up for that something in each situation and place?

A **checklist,** like the Yellow Pages, can be a very valuable source of ideas.

A **catalog** is a treasure chest filled with "idea starters."

Exercise Number 1

Christmas is coming and that means buying Christmas presents for your 17 cousins, nephews, and nieces . . . and you don't have very much money (again!) this year. What are some checklists or references you might use to give you ideas for buying or making gifts?

_____

_____

_____

_____

Exercise Number 2

The Newspaper can be used to consciously seek out items that might be approached creatively for personal benefit. It has many useful and thoughtful "idea starters."

Read the paper and list at least one new idea which would benefit you personally from each of the following sections of the newspaper.

Want Ads_____

An Advertisement _____

Front Page Article _____

Comic Strip or Cartoon Section _____

_____

_____

_____

_____

_____

_____

_____

NUMBER 2 - A

Checklist for

CHARACTERISTICS WHICH ARE A CLUE TO CREATIVITY

Be honest with yourself as you answer the following questions!

	Yes	No	Sometimes
1. Do you have an intense interest in something?			
2. Do you have a lively imagination?			
3. Are you energetic and on the move?			
4. Do you ask questions all the time? Questions beginning with such words as who, how, why, what if, there, when, which, suppose?			
5. Do you have stickability—do you stay with a creative project until it is finished? Do you follow through on ideas set in motion?			
6. Do you examine and study things closely?			
7. Do you like to experiment, explore, investigate?			
8. Are you inventive?			
9. Do you have an independent spirit and are you independent in your thinking?			
10. Do you have a curious nature? Do you seek out new experiences, although they sometimes get you into trouble?			
11. Do you keep an open mind? Do you show a willingness to consider or explore strong and wild ideas?			
12. Do you have a sense of humor? Do you laugh easily and enjoy a good story?			
13. Are you an enthusiastic person who has a zest for living?			
14. Do you have good judgment? Do you search for truth? Do you search for facts? Evaluate them? Try to always understand first then judge?			
15. Can you see relationships among apparently unrelated ideas?			

16. Do you have a tendency to seek alternatives and explore new possibilities?

17. Do you take a close look at things? Are you observant?

18. Do you have purpose and goals? Do you know your subject? Do you do your homework? Do you enjoy reading?

Yes	No	Sometimes

How did you do? Add up your Yes answers. If you have 13-20 you are well on your way toward creative fulfillment.

If you have 8-12 you've started toward the goal of creative living but have a way to go.

If you have 7 Yes answers or fewer, well!!! Get busy, do the mind-stretchers, warm-up exercises, idea-starter techniques. A regular, systematic study, over a period of time will help increase your creativity skills. Remember, however, learning creativity skills is like playing a piano. You can buy a piano, and music and have the desire to play well and to entertain others. However, if you don't practice regularly and use correct techniques you will not accomplish your goal. It is better to study on a weekly basis over a period of time.

HAPPY CREATING

NUMBER 2 - B

FREE–WHEELING EXERCISE

"Go for quantity first"

The objective of this technique is to produce a large quantity of ideas. Get every possible and "impossible" idea down on paper.

Once you start writing down ideas, you'll be delighted by how often you score with good, useable ideas. It is important to be relaxed, have a quiet, undisturbed place to work and to let you go, and keep your mind open. Ignore your surroundings and concentrate!

Exercise 1

Begin by writing your problem at the top of a piece of typing paper and start filling the space with ideas. Let your mind wander freely and jot down anything and everything that "pops" into your head. Let it drift freely until it gets somewhere—until you feel you have hit upon a workable idea.

Exercise 2

Another and more structured method of "Free-wheeling" is to begin with a symbol—a word, sketch, number, picture—which relates in some way to an important aspect of the problem under consideration.

Step 1. Allow yourself 1 minute in which to free-wheel from this starting symbol "SWEET". Begin as you did in Exercise 1.

Step 2. Stop at the end of 1 minute and count the symbols you have written. If your list of ideas number only 10 or less you aren't in the swing of it. Take another minute and free-wheel some more. Let yourself go.

Step 3. Choose one or two new symbols or ideas at random from your list and get more practice in carrying out this type of productive day-dreaming.

Step 4. Continue until some of the symbols you have recorded in some way make a "special" impression that leads to the kinds of ideas you are seeking. Deliberately review and analyze your symbols (ideas); select those that seem to have some special implications in relation to your one symbol "SWEET".

Step 5. Re-work, modify or adapt your ideas until they fit the purpose you are trying to accomplish--to develop an advertising slogan for a new diet sweetner.

Step 6. Ask someone to look at your ideas and add as many of his as he can think of. This may give you some other ideas with which to work.

Adapted from:
Taylor, Jack, How To Create New Ideas, pp. 75-81.

CREATIVE LIVING STARTS NOW

NUMBER 2 - C

YOUR TALENTS ARE SHOWING

Using your past "talent show-throughs" and your new discoveries, figure out some way you can go to town on the special talents you recognized. The purpose of this exercise is to get you to use the talents that are locked up inside of your, and help you to develop confidence and courage in using your potential.

My "talent show-throughs" in the past (Write down any activity in which you feel you have shown a flair in school, in church work, club work, in social life, at work around your home—anything you've found you can do easily and well or anything that made you feel especially good when you did it.)

1. _____

2. _____

3. _____

New discoveries of my "talent show-throughs" (Keep your eyes open for current "show-throughs" as they come along. As soon as you spot anything that you have done well or have an interest in, write it down—keep this notebook close by. "It's your life".)

1. _____

2. _____

Plans for "follow-up" action (These "show-throughs" hint at the hidden potential you have within you and can be used in confidence building by developing plans for using these talents.)

_____

_____

_____

Adapted from:

Edwards, William E., 10 Days to A Great New Life, pp. 86-88.

NUMBER 2 - D

THE MOST CREATIVE PERSON I'VE KNOWN

Describe in written or oral form the most creative person you know. Include the following information: personality traits: what does he or she do well? How is time and energy managed? What is the social, economic and cultural background of the person? What is his age? What has the person done to make you feel that he or she is creative.

_____

_____

_____

_____

_____

_____

_____

_____

NUMBER 2 - E

CREATIVITY BENEFITS

How could new ideas help each of these people in their jobs (other than receiving a raise in pay?)

Select 4 to discuss

A Chef in a restaurant

A Secretary

A Custodian

A Teacher

A Football Coach

An Auto Mechanic

A Store Manager

A Sales Clerk

NUMBER 3 - A

JUDGMENT TEST

Instructions: Read and Decide if the numbered statements are true, false or questionable. Take them one at a time. Do not go back and re-read earlier statements when working on later ones, and do not change any of your answers after you have decided on them.

Circle the "T" after a statement if you consider it definitely true.

Circle the "F" if you consider it definitely false.

Circle the "?" if you consider it questionable.

The answers and explanations are on page 51.

STORY

One Saturday Mrs. Robert Johnson went shopping for 2 hours. She had to buy several items at a nearby department store. She then traveled to the next suburb to buy the groceries because they cost less at a supermarket in that part of the city.

Mrs. Johnson had a neighbor. Mrs. Larson, take care of her son, Bobby, Jr., while she was away. While she was gone the house caught on fire and Bobby was burned severely. She was very frantic and almost went into shock when she saw Bobby.

1. Mrs. Johnson was away from home for at least 2 hours on Saturday.	T	F	?
2. Mrs. Johnson was gone from home for less than 2 hours on the weekend.	T	F	?
3. Food was cheaper in the suburban supermarkets.	T	F	?
4. The house next door to the Johnson's caught fire.	T	F	?
5. The Johnson's home caught on fire.	T	F	?
6. Mrs. Johnson went shopping in a department store in the suburb.	T	F	?
7. Mrs. Johnson became frantic when she way Bobby's severely burned body.	T	F	?
8. Mrs. Larson was babysitting with Bobby Jr.	T	F	?
9. Bobby, Jr. was Mrs. Johnson's son.	T	F	?

NUMBER 3 - B

DIG DEEPLY TECHNIQUE

Choose one, examine it carefully, and using the back of this page allow 3 minutes to list all of the qualities you can think of for the object you chose.

a. a band-aid
b. a piece of sand paper
c. a paper weight
d. a rose
e. an umbrella
f. a potholder
h. a ball point pen
i. a pencil sharpener
j. an electric skillet
k. a toothbrush
l. an orange
m. other objects

Purpose of Exercise

To create original work–used to introduce new procedures of any type.

To learn application and concentration

To get enthusiastic about everything–people, places and things.

Procedure:

Learn to think for ½ hour a day exclusively on one subject.

Begin by thinking on one subject for five minutes then work up to 30 minutes.

Make a slight mark when your mind wanders.

Begin with a concrete subject. It is best to start with a subject that really interests you.

When you have taught your mind not to wander even for a moment, begin choosing a subject by putting your finger at random on a newspaper or the page of a book. Think on the first idea suggested by the lines you have touched.

Think of 2 things in which you have little or no interest–maybe cards, certain kinds of music, a sport. Now ask yourself, "How much do I really know about these things?" Odds are 100-to-1 that your answer is "not much."

To get enthusiasm, learn more about the things you are not enthusiastic about.

This technique can also be used to develop enthusiasm toward people. Do this by finding out all you can about another person–what does he like, what does he do, his family, background, ideas and ambitions. As you get better acquainted you'll find your interest and enthusiasm mounting toward the person. Keep digging and you're certain to find some common interests. Keep digging and you'll eventually discover a fascinating person.

NUMBER 3 - C

CREATIVITY BLOCKS

Investigation, experimentation, and research show that there are many powerful obstacles keeping us from using more or all of the "Creative Potential" we possess—these forces work against the liberation and wider application of our latent creative powers.

What are the "Obstacles to Creativity?"

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

Check which of these creative blocks are holding you back. Make plans for eliminating off-setting or overcoming each of the blocks and/or its effects. Begin to put these ideas into practice.

NUMBER 3 - D

MIND STRETCHER

15 Minute Time Limit

1. A farmer had 17 sheep. All but nine died. How many did he have left?

2. An archeologist reported finding two gold coins dated 46 B.C. Later, at a dinner in his honor, he was thoroughly and openly discredited by a disgruntled fellow archeologist. Why?

3. Two men played checkers. They played five games, and each man won three. How do you explain this?

4. Name the city—what large and well-known city in the United States is half golden and half silver?

5. Were they related? "I think I know you," said the gentleman to the lady. "Perhaps you do," she replied, "for your mother was my mother's only daughter."

6. A fish story. There is a fish the head of which is nine inches long, its tail is as long as the head and half the back; and the back is as long as the head and tail together. How long is the fish?

7. How old is Ann? Mary is twenty-four years old. She is twice as old as Ann was when Mary was as old as Ann is now. How old is Ann?

8. Detect the device. As a person interested in developing your creativity, you're probably familiar with many of the latest inventions. See whether you know the answer to this one. What's the name of the device which is used to help people see through brick walls?

9. Name a word that has twenty-six letters.

10. A six-foot man can eat three eggs at a sitting. How many eggs can a nine-foot tall giant eat on an empty stomach?

11. What's the word that you can pronounce faster by adding a syllable?

12. Three heavy ladies walking down the street suddenly crowd under a small umbrella, yet not one of them gets wet. How come? (No, they don't stand on each other's shoulders).

13. No matter how many tongues you may know, you may not know the answer to this riddle. What can speak every language in the world?

14. A salon that's jammed with a hundred married people might be likened to an empty room. How come?

15. What is the one word that almost everybody usually pronounces wrong?

NUMBER 3 - E

THE MYSTERY MATERIAL

Today you are going to be given the opportunity to capitalize on an exciting product which has the potential for being used in a wide variety of ways. In recent years research scientists have developed raw materials—materials such as textile fibers, plastics, drugs to relieve pain, chemical substances to aid mankind, ceramics, and building materials. A group of researchers have developed a product labeled, simply, "Material X." This material has some remarkable, unique properties. It cannot be patented and, therefore, will be available to anyone who can develop uses for it.

Are you interested in this creative project? If you want to develop new uses for this product, then you will need to consider the following qualities of this amazing material.

It is:

- a solid
- non-corrosive
- a non-conductor of electricity
- inexpensive, basic material
- lighter than metal
- compatible with other materials such as wood, leather, glass, rubber, metal, textiles, paints, dyes
- resistant to the passage of heat and sound
- fairly abrasion resistant
- impact resistant and has good shear strength
- higher in tensile strength pound for pound than steel when produced in laminated sheet form

It can be:

- made in almost any color
- made in a variety of shapes and sizes
- made, produced and processed on existing machinery in great quantities from plentiful supplies of raw materials
- made flexible or inflexible
- made to absorb or reflect light
- made either durable or short-lived
- made combustible or non-combustible
- made opaque, translucent or transparent
- made with rough, smooth or textured surface
- made dimensionally stable or dimensionally variable
- made to resist the action of various chemical substances
- made to resist penetration by gases, oils, vapors, greases
- made to resist the effects of sunlight, fungus attack, weathering

This material has already been tested and found to be satisfactory when used for railroad wheels with a life-expectancy of several hundred thousand miles. It has been used as a factory chimney, as the major material used to build a small church and for paving or surfacing a road. When used for watch parts the results were extremely satisfactory.

From the variety of uses already discussed can you begin to see that there may be countless other possibilities yet undeveloped?

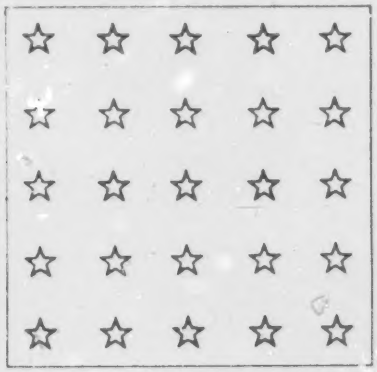
If you are interested in this project begin by listing all the uses you can think of for this versatile, unique "Material X". As you think of possible uses add them to your list. Keep on thinking of ideas throughout the entire unit. Upon completion of the unit you will be given more information concerning this mysterious material.[1]

[1] Adapted from:
Taylor, Jack, How to Create New Ideas, pp. 34-38

BRAIN TEASERS

1

CAN YOU CONNECT 12 STARS TO FORM AN OUTLINE OF A CROSS LEAVING 5 STARS UNTOUCHED ON THE INSIDE AND 8 ON THE OUTSIDE?

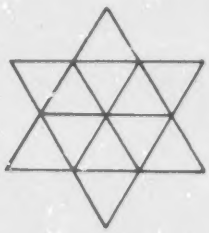


2

DRAWING THREE STRAIGHT LINES CAN YOU ENCLOSE EACH ITEM IN ITS OWN AREA?

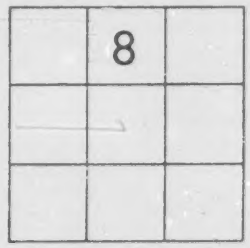
3

HOW MANY TRIANGLES OF ANY SIZE ARE IN THIS STAR?



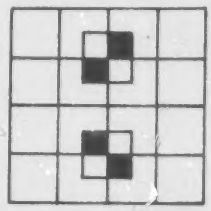
4

CAN YOU NUMBER THE REST OF THE SQUARES SO THAT EVERY ROW, COLUMN, AND DIAGONAL WILL ADD UP TO 15? (NO NUMBER MAY BE REPEATED)



5

CAN YOU COUNT THE NUMBER OF SQUARES?



Adapted from:

AMERICAN CAN COMPANY
problem solvers in packaging, paper, chemistry.
100 Park Avenue
New York, N.Y. 10017

NUMBER 3 - G

"HOW WOULD YOU RESPOND"

John: I've been having the best time in Physics class. We're studying electronics and I'm working on a way to heat cushions for football games and sleeping bags, using acid to create an electronic circuit.

You: (List 2-3 answers you might give to John which might stifle his creativity)

You: (List 2-3 answers you might give to John which might encourage or stimulate his creativity)

I don't know WHAT it is But I made it myself!

NUMBER 4 - A

PART CHANGING TECHNIQUE

One of the best ways to think of new ideas for changing or improving something is the "Part Changing Method." This is done by taking one part or quality at a time and thinking of ways to change that part or quality.

Dividing a problem into smaller parts is important in creative work. Whenever we concern ourselves with too many factors in the beginning we lose our ability to achieve new solutions regardless of the type of problem.

Unfortunately this " dividing-up technique" is opposite of the way we usually approach a problem.

Usually we want either to solve the entire problem all at once or we give it up as impossible and quite.

Divide the problem or situation into smaller parts. After each part has been separated, explored, modified, and evaluated one by one it should be organized to form new combinations and to increase understanding.

This method can be used with many types of problems.

DIVIDE and CONQUER

Exercise 1

Find 2 or 3 items in your pockets or purse. How could each of these items be changed or improved? Think of solutions by picking out parts or qualities and then thinking of ways to change each part or quality. What is the original purpose of the product?

How to carry out this exercise:

1. List the parts of the item
2. List the features that make this item different from everything else. What features make it interesting, valuable, useable?
3. Taking each part how could it be changed or modified to create a new method for it or to improve the current purpose of it?
4. See how many combinations you can come up with.

Item one: _____

Changes or improvements:

Item two: _____

Changes or improvements:

"NOTHING IS PARTICULARLY HARD IF YOU DIVIDE IT INTO SMALL JOBS!"

Henry Ford

PART CHANGING TECHNIQUE

Exercise 2

Some breakfast cereals are shaped after the letters of the alphabet. Let's invent some new breakfast cereals by thinking of some different shapes, flavors, colors, sizes. These are four qualities of breakfast cereals, right? Be imaginative.

SHAPES	FLAVORS	COLORS	SIZES

Adapted from:

Davis, Gary A., and Houtman, Susan E., **Thinking Creatively**, p 13.

PART CHANGING TECHNIQUE

Exercise3

Imagine you were a toy manufacturer. You have a warehouse filled with skateboards that have not sold. Your problem is to decide which part or quality of the skateboards to change so they will really be different, and once again sell like crazy and make your another million $$$. List some parts (or qualities) of the skateboards, and then think of creative ideas for changing these parts.

Part of quality

Number 1 _____

Number 2 _____

Number 3 _____

Number 4 _____

Changes:

Adapted from:

Davis, Gary A., and Houtman, Susan E., **Thinking Creatively**, p. 14.

NUMBER 4 - B

ASSOCIATIONS

"YOUR IMAGINATION 'TAKES-OFF' THROUGH CREATIVE ASSOCIATION WITH OTHER IDEAS AND EXPERIENCES."

Our actions through our life are the result of associations with earlier ideas and values.

Prepare a list of major experiences in your life.

Every time we come up against a situation demanding new ideas, we can think about each experience on the list. As you remember in more detail the many small, almost forgotten events that occurred near these important happenings you may see similarities or contrasts to what you are now trying to do. Such a list helps insure that a foggy memory will not hurt us in our quest for ideas.

Associations can be made by:

. . . . Contiguity

. . . . Similarity

. . . . Contrasts

. . . . Analogies

1. CONTIGUITY—this means nearness—it relates one incident or characteristic with another.

(1) a baby's shoe reminds you of an infant

(2) a dictaphone can mean "executive"—a successful executive because he conserves time and produces more work because he makes use of a dictaphone

2. SIMILARITY—a picture of a lion will remind you of a cat. Metaphors, fables and parables are all founded on similarities.

Definitions:

Metaphor

a figure of speech in which a term or phrase is applied to something. It is not a literal application but suggests a resemblance.

Example:

"He embarked early on the sea of life" or "He climed at last to the very summit of success."

Parable

a short story or saying conveying the intended meaning by a comparison and designed to convey some truth or moral lesson.

Example:

"The Parable of the Mustard Seed"

Fable

a story or tale (often with animals or inanimate things as speakers or actors), designed to convey a moral; also a legend or myth, mere fiction or fabrication.

Example:

"The Boy Who Cried Wolf"

3. CONTRAST—a midget might remind you of a giant, black of white, hobo of a millionaire.

4. ANALOGY—seeing parallels between objects or ideas. It is a resemblance in some particulars between things otherwise unalike.

Example:

(1) hand is to glove as foot is to shoe

(2) father is to son as mother is to daughter

(3) snow is to skiing

as water is to swimming

5. Association also works with sound. A certain song reminds you of an event (pleasant or unpleasant). Can you think of sounds you associate with an event? How might you use these creatively?

ASSOCIATION EXERCISES

Exercise 1

List the major (significant experiences) in your life. (You may need to attach other sheets).

Exercise 2

Give an example of each:

Metaphor

Parable

Fable

Exercise 3

Think of 3 more contrasts and list below.

1.

2.

3.

Exercise 4

Give 2 examples of analogies:

1.

2.

NUMBER 4 - C

THE "THINK BIG" APPROACH

This "breakthrough" approach" can unblock your creative thinking and lead you to think fresh new thoughts. It can open up new areas in your life—make life a more exciting and challenging adventure.

THERE IS NO LIMIT TO THE IDEAS AND DREAMS IN THIS UNIVERSE

Are you being held back or hemmed in by the size of the thoughts you think?

Break out of your "squirrel cage" thinking with this "Think Big" approach. Free you thoughts and take dramatic new approaches toward events, ideas and projects. You can become a "trail blazer" instead of a follower.

This approach works because we tend to put forth only the degree of effort or strength we think a task requires. When we "Think Big"—when we set bigger goals then we step up our effort, find more energy, increase our capabilities to meet the increased demands.

GET ON FIRE WITH ENTHUSIASM!

Here's the way you begin this approach:

1. Imagine that you are suddenly faced with the necessity of doing things 10 times bigger or better than you are now doing them or with becoming 10 times better than you are now in some area of your life.

   This 10 times bigger and better challenge can jolt us out of our ruts.

   It can be used at home, at school, in social activities and on the job.

   It doesn't take special materials and equipment.

   It does take courage and a belief as you take one thing you are now doing and imagine how it can be done 10 times bigger and better.

2. Continue your current patterns, but try stepping up your activities. You shouldn't change everything too fast.
   Remember, it takes time to replace one habit with a new more productive one.

3. A word of caution—you can't just sit around and "Think and Dream Big"—you must act on your ideas.

BEGIN YOUR "THINK BIG" FILE

I'm going to break through my "squirrel cage" thinking and I'm going to imagine that I must multiply by ten _____
fill in your goal or desires.

To achieve this goal I will do the following:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

In Section 5 we will learn to use the steps for following through on these ideas.

Adapted from:

Edwards, William E., 10 Days To A Great New Life, pp. 170-193.

DREAM BIG —
PUT DREAMS INTO ACTION!

NUMBER 4 - D

FIND YOUR CREATIVITY PEAKS

This exercise can help you determine the best time for you to do your creative thinking and to carry out your creative activities.

Day_____ Date_____

	Very Tired	Tired	Ave.	Alert	My "Great Ideas" come to me
Immediately on getting up					
At work 9 a.m.					
At work noon					
At work 2 p.m.					
Immediately after school					
After dinner					
Before going to bed					

Do this for one week.

NUMBER 4 - E

MAGIC SQUARES

Exercise 1

Using the graph, combine squares, pick out a variety of characters and settings and develop ideas for a new kiddie-cartoon series.

	Home	Outer space	Zoo	Jungle	Pirate ship	Wild West	Mysterious City	Castles	Magic Lands	Underground City	Underground magic castle	Outer space magic castle	City on the Moon	Underground home or school on another planet
Space men														
Pirates														
Cowboys														
Secret Agents														
Creepy Monsters														
Kings or Queens														
Indians														
Ghosts														
Dragons														
Mermaids														
Talking animals														
Giant earthworms														
Elves														

CHARACTERS

_____

_____

SETTINGS

_____

_____

Adapted from:

Davis, Gary A., and Houtman, Susan E., Thinking Creatively, p. 34.

NUMBER 4 - E

MAGIC SQUARES

Exercise 2

You are a dress designer for the young market and would like to develop a new fashion look that would be appealing to that age group, and make you lots of $$$. Make a checkerboard with different types of garments such as slacks, blouses, dresses on one side and different trims and design ideas along the top.

Trim and Design Ideas

Type of garments										
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										

Types of garments

Trim and Design Ideas

NUMBER 4 - F

SPARK UP THE ORDINARY

EXERCISE: Take one item in your life that seems ordinary or commonplace and see if you can add some "spark" to it by using the creative approach in carrying it out.

EXAMPLE: Are you a creative cook? Can you create a Gourmet Dish out of yesterday's turkey? Or do you see it as nothing but a leftover from your Thanksgiving feast? Can you look at the remains of the bird and see a steaming casserole, fragrant with herbs, spices and other delectable ingredients? As one hostess commented, "Leftover turkey is either a cold uninviting carcass, or a bubbling, luscious casserole—it's all in the way you use your imagination."

"TO ORIGINATE FIRST RATE SOUP IS MORE CREATIVE THAN DOUBLING A SECOND-RATE PAINTING."

NUMBER 4 - G

CREATE YOUR OWN CASSEROLES

Choose One Ingredient or Combination of Ingredients From Each Column

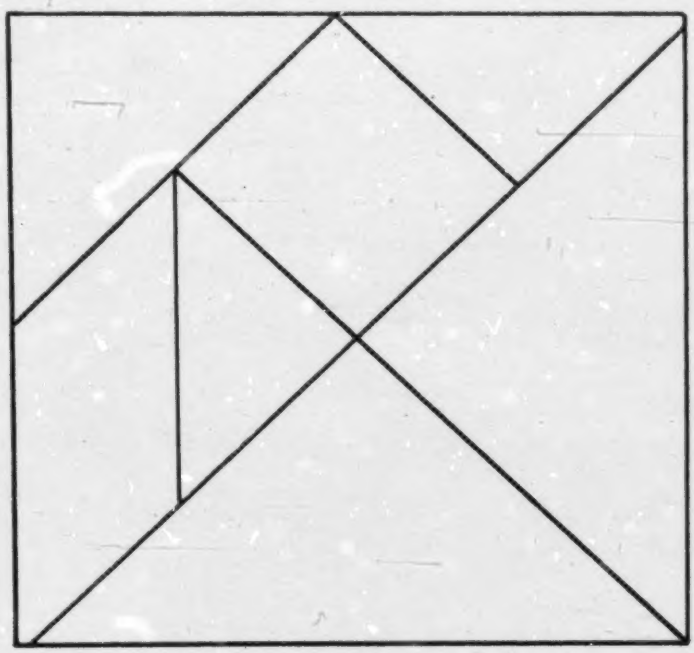
PROTIEN FOOD	SAUCE	COOKED VEGS.	COOKED PASTA	TOPPING
(1 ½ - 2 cups)	(1 can condensed soup + 1/3 cup liquid)	(1 ½ cups)	(1 ½ - 2 cups)	(2-4 Table-spoons)
cooked ham, sliced	cream of celery & milk	Sauteed green pepper, celery and onions	noodles	crushed potato chips
cooked or canned chicken or turkey	cream of chicken & half and half cream and milk	Fresh or canned mush-rooms	macaroni	bread crumbs
canned lun-cheon meat	cream of potato & sour cream	cooked or canned green beans, peas, carrots, asparagus, lima beans, pork & beans, corn, potatoes, or sweet pota-toes	rice	fried onion rings
cooked beef, veal, lamb, or pork	green pea & veg. juice		spaghetti	crushed corn flakes
hard-cooked eggs	chedda- cheese & tomato juice			cooked instant mashed potatoes
frank-furters	tomato & water			slivered almonds
cheese				cracker crumbs
canned tuna or salmon				stuffing mix
				grated cheese

Adapted from: "Reveal Advertisement"

NUMBER 4 - H

PICTURE PUZZLE

Look at the copy of an old Chinese puzzle. Cut the puzzle into its seven shapes and see what kind of interesting pictures you can make. All seven shapes should be used and shouldn't overlap. Can you find a candle, house, and sailboat as you arrange them? You may wish to color them as you "do your own thing".



Adapted from:
Susie Watts, "Denver Post", Feb. 3, 1974

NUMBER 4 - I

CREATE A PICTURE OR DESIGN

Develop originality through the use of abstract design. Use circles, squares, triangles or a variety of geometric shapes.

1. Make a picture or design with the shapes that have been given to you. Add lines you need to make your picture. Use the following suggestions or others you may think of to create your picture.

   a. Use only two colors.

   b. Use only punctuation marks.

   c. Use only letters or numbers.

   d. Use a page of shapes, lines, or combination of shapes and lines.

   e. Use straight lines only.

   f. Use different types of materials.

   g. Find a new art form and construct your own work of art.

Adapted from:

Talent Ignition Guide, p. 4.

NUMBER 4 - J

4 C'S TECHNIQUE

"Compare, Contrast, Combine, Create"

Exercise 1

Select 2 unalike objects (one from each list and compare them).

lamp	cream
platter	screw
chair	pan
knife	coffee pot
wrench	book
car	picture
typewriter	porch
adding machine	house
pen	pulley

How are they alike?

How are they unalike?

(Record everything you can think of)

Analyze the comparisons and contrasts. Do you find a pattern or basic idea which they have in common?

How could they be combined to create a useful product or game?

NUMBER 4 - K

RHYME TIME

THE PROBLEM: Develop several combinations of adjectives and nouns that rhyme. As an example of a two-word rhyme, Jonathan Livingston Seagull might be a "higher flyer". A limber pair of dancers might be a "supple couple"; a delayed husband, a "late mate". You probably can do better than these examples, but a word of caution—once you start thinking this way, you'll want to keep going.

One more example before you put your brain to work—in describing a group of people who follows the crowd, you might use "herd-urge".

NUMBER 5 - A

PREJUDICE QUOTIENT

This word-association game might help you to determine your "Prejudice Quotient." Study each of the following words. Next to them write down anything that each word suggests to you. The only requirement is that you be honest with yourself.

NAVY OFFICER _____ _____ _____

PROFESSOR _____ _____ _____

CUSTOMER _____ _____ _____

CHEERLEADER _____ _____ _____

FOOTBALL PLAYER _____ _____ _____

ITALIANS _____ _____ _____

LABORER _____ _____ _____

DOCTOR _____ _____ _____

SALESMAN _____ _____ _____

UNIONS _____ _____ _____

HIPPIES _____ _____ _____

LIBERAL _____ _____ _____

Did you have any trouble filling in the blank spaces? Most words will call forth an association.

The key would be to look over lists of words you used to fill in the blanks. Were the majority of the associations positive or negative? The words used would be an indication of your Prejudice Quotient.

Adapted from:

How To Sharpen Your Thinking, p. 20

NUMBER 5 - B

MY BLUEPRINT FOR ACTION

My Desire, Need or Problem

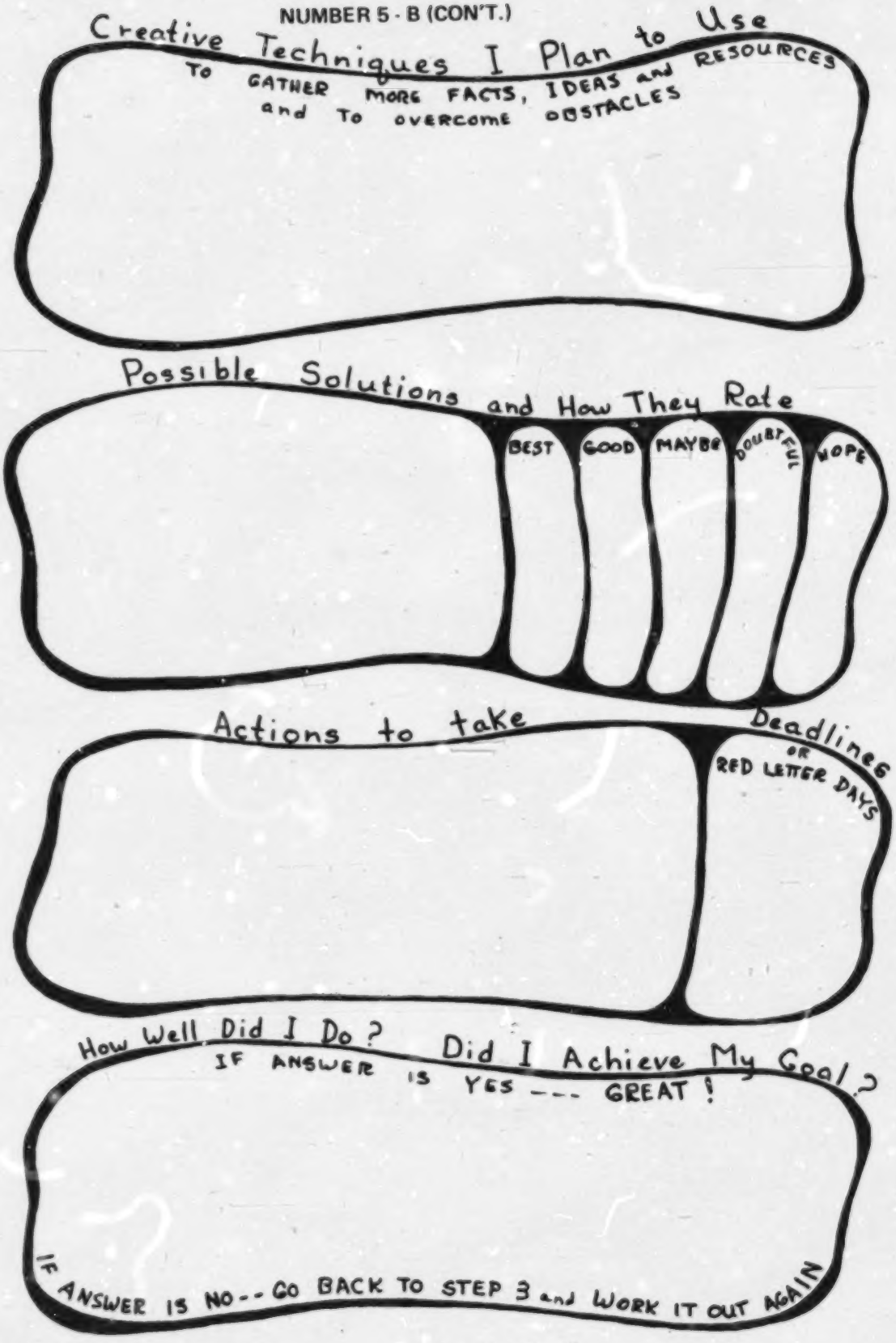
My Goal

What I Know about the Subject

FACTS I KNOW	RESOURCES I HAVE	OBSTACLES TO OVERCOME

What I Need to Find Out

FACTS TO GATHER	RESOURCES TO GAIN	WAYS TO OVERCOME OBSTACLES


Creative Techniques I Plan to Use
TO GATHER MORE FACTS, IDEAS and RESOURCES and TO OVERCOME OBSTACLES
Possible Solutions and How They Rate
BEST
GOOD
MAYBE
DOUBTFUL
HOPE
Actions to take
Deadlines OR RED LETTER DAYS
How Well Did I Do?
Did I Achieve My Goal?
IF ANSWER IS YES --- GREAT!
IF ANSWER IS NO -- GO BACK TO STEP 3 and WORK IT OUT AGAIN

NUMBER 5 - C

CHECKERBOARD TECHNIQUE

(Or in other words 10 x 10 technique)

1. State your problem, concern, or issue.

2. At the top of each column list 10 solutions and/or suggestions concerning the above stated problem, concern, or issue. (These will probably be easy to think of.

3. Under each suggestion, think of 10 more suggestions. (NOW THE BRAIN–STRETCHING BEGINS).

   By multiplying your original 10 solutions by 10 other solutions in each column, you have increased the possibilities by 100. (YOU ARE NOW DIGGING DEEPLY.)

4. To see new combinations, separate each column on the checkerboard. By moving the strips up and down next to each other, new relationships between the listed solutions can be seen. (THE COMBINATIONS AND RELATIONSHIPS ARE SOMETIMES ASTOUNDING.)

IDEAS BREED MORE IDEAS!

Problem, Concern, Issue:

1	2	3	4	5	6	7	8	9	10

WHAT IS THE BEST SOLUTION FOR THE PROBLEM

Using one of the suggested problem situations, explain or write a possible solution that will solve the problem.

Suggested Problems

1. You are an astronaut who along with your companions have just completed your last moon walk. The samples have been collected and you are ready to return to your space craft. Suddenly, all communications with Earth are lost, and you are completely on your own since all your plans for lift-off and re-entry depend on computer information from Space Headquarters located on Earth.

   The problems you must face are these: (1) If you wait you use up precious oxygen needed to support life. (2) All of your communication systems are operable; therefore, the problem must be from Earth. (3) The exact instant for lift-off cannot be delayed because of the precise computer planning. An immediate decision must be made.

   You are the astronaut in charge. You must decide what to do.—Decisions as to when to act and how to act, keeping the greatest safety of the greatest number in mind.

2. If you were being forced to move to a desert island where you would remain out of touch with anyone else for 20 years, and knew you would have all of the food and materials you need but your reading material will be limited to just 10 books, which 10 books would you choose to take?
3. You are an Indian child and must move with the tribe to better hunting grounds. You can take only what you can carry since you will be walking for several days. What will you take with you and why?

Adapted from:

Talent Ignition Guide, p. 42.

NUMBER 5 - D

HOW DO I LISTEN?

	Usually	Some-times	Seldom	Almost Never
1. I am open-minded.				
2. I look at the person speaking.				
3. I try to understand the other person's purpose.				
4. I help the other person establish a pleasant climate for understanding.				
5. I dispel prejudice and emotion.				
6. I try to sift fact from inference.				
7. I avoid daydreaming on other subjects.				
8. I try not to jump to hasty conclusions.				
9. I ask questions.				
10. I try to apply the message to my needs.				
11. I consider most subjects interesting.				
12. I am critical of the speaker's delivery.				
13. I sift out the emotionally colored words.				
14. I fake attention to the speaker.				
15. I create disturbances when not interested.				

NUMBER 5 - E

SHARPEN YOUR LISTENING SKILLS

1. To sharpen your listening skills carry out three of the following exercises:

   a. Listen to a news broadcast and analyze for content and emotionally colored words. Also listen to commercials, dramas, conversations, and oral reports.

      Radio and television commercials provide stimulating practice for common propaganda techniques: name calling, transfer, testimonial, plain folks, band wagon, card stacking, glittering generalities and repetition. Classify appeals used.

      Listening to a drama, you can note the theme, plot, characterization, setting, mental picture of all images, etc.

   b. Close your eyes and listen for a number of seconds. Make a list of every different sound you heard during that time.

   c. Listen to and repeat directions that might be given to a traveler attempting to reach a particular place.

   d. To develop critical listening abilities, evaluate a political speech or lecture or discussion using these suggestions:

      (a) What is the speaker's purpose or motive?

      (b) What emotionally toned words or phrases does he use to sway his listeners?

      (c) Are his views based on fact or opinion?

      (d) Does he sell his points by use of propaganda techniques or by logic?

      (e) Do his statements agree or conflict with my experience?

      (f) What is important in his speech to others and to me?

      (g) Does the speaker contradict himself?

      Listening to shorter selections with a single purpose can also be a means of developing this technique.

2. Using the suggested criteria on the questionnaire (Number 5 - D) "How Do I Listen?", analyze your listening skills at the end of each day for a period of one month.

   Continue to work on your personal goals to become a better listener as one aspect of improving your communicative skills.

3. Read: Valle, Marta, "Is Anybody Listening?", Teen Times, Nov/Dec. 1968. pp. 2-6

GOLDEN RULE FOR GOOD LISTENING: "ALWAYS LISTEN TO OTHERS AS YOU WOULD LIKE TO HAVE OTHERS LISTEN TO YOU!"

NUMBER 5 - F

CRITERIA FOR JUDGING SUGGESTED SOLUTIONS

PROBLEM:

POSSIBLE SOLUTIONS	CRITERIA FOR JUDGING						

Rating Scale

1–Poor

2–Fair

3–Good

4–Excellent